

PSYCHOLOGICAL ABSTRACTS

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GENERAL

(incl. Statistics)

5437. [Anon.] **Catalog of the Association of School Film Libraries.** New York: Association of School Film Libraries, Inc., 9 Rockefeller Plaza, 1938. Vol. I. Pp. 121. \$5.00.—This catalog lists 117 silent and sound 16 mm films for classroom use. Approximately one third are of psychological interest. The title, date of production, producer, rental and sale costs, distributor, and a detailed description of each film are given. About one half of the pictures are critically appraised. The 1938-1939 Bulletin of the Museum of Modern Art Film Library is included in an appendix.—*L. F. Beck* (Oregon).

5438. **Barry, R. F. An analysis of some new statistical methods for selecting test items.** *J. exp. Educ.*, 1939, 7, 221-228.—This paper sets forth a new method for evaluating test items, the chief virtues of which are speed and simplicity. In the analysis the author compares the validity of the items selected by the new method with the validity of items selected by biserial r , and compares the consistency of its evaluations of items with the consistency of biserial r for the same items. The method gives an index of discrimination which combines two distinct elements: (1) positional with respect to criterion categories, and (2) quantitative with respect to deviations of obtained distributions from a standard distribution, category by category.—*H. W. Karn* (Pittsburgh).

5439. **Bischler, W. Psychologie et psychologies, théories et méthodes.** (Psychology and psychologies, theories, and methods.) *Arch. gen. Neurol. Psychiat.*, 1937, 18, 334-342.—*R. Ricci* (Rome).

5440. **Bleuler, E. Erläuterungen und Ergänzungen zum Mnemismus.** (Notes and amplifications on the doctrine of mneme.) *Nervenarzt*, 1939, 12, 9-24.—The psyche is identical with an arrangement of brain functions, the "psychical" and the "physical" being only apparently different. Except for awareness, psychical elements are mneme combined with various tendencies. Mneme possesses all known properties of memory except that it is not always accompanied by awareness. It is expressed in bodily activity and is hereditary. Thinking is a systematic ecphory of related experiences. The totality of mnemonic functions affecting the body is psychoidal. The "biochyme" is a force, undirected in itself, to which quantitative and qualitative activities are referred by sensory stimuli and mneme. It is distinguished from the life force of vitalism, the latter being "creative intelligence." The author defends himself against von Berze.—*P. L. Krieger* (Leipzig).

5441. **Carr, H. A., & Kingsbury, F. A. The concept of the individual.** *Psychol. Rev.*, 1939, 46, 359-382.—The term "psychological individual" is offered in place of the older concepts of "the self" and "personality" to designate the conceptual construct whose nature must be defined in terms of such categories as abilities, traits, attitudes, motives, etc. It has the advantage of being objective, of recognizing the existence of individual differences, of being applicable to animals as well as humans, and of being usable to refer to either the particular organism or, in the plural, to a collection of organisms. Introductory psychology texts are organized around the two categories of *behavior* or *action*, on the one hand, and the *nature of the individual* on the other, with no obvious relation between them. This is due to the inadequate account of the psychological activities. It would be possible for a text to give a complete explanatory account in terms of these activities, provided the author discussed the total reactive nature of the individual. For example, such a discussion would account for selectivity of response in terms of ideals, interests, attitudes, etc., and for the genetic significance of self-consciousness. Such a text would bridge the dichotomy between act and individual.—*A. G. Bills* (Cincinnati).

5442. **Casanova, T. A simple graphical method for determining the significance of a difference.** *J. educ. Psychol.*, 1939, 30, 289-294.—A graph for interpreting significance of a difference is presented and its use is discussed.—*R. M. Bellows* (Maryland).

5443. **Casanova, T. A test of the assumptions of linearity and homoscedasticity made in estimating the correlation in one range from that obtained in a different range.** *J. exp. Educ.*, 1939, 7, 245-249.—The author proposes a test of the assumptions of rectilinearity and homoscedasticity throughout both ranges that will enable one to choose the most suitable variable on which a fair correlation estimate may be based, or to conclude that none of the variables may provide a solution within the error of random sampling.—*H. W. Karn* (Pittsburgh).

5444. **Champney, H., & Marshall, H. Optimal refinement of the rating scale.** *J. appl. Psychol.*, 1939, 23, 323-331.—Ratings of parent behavior were obtained by means of a graphic rating scale. The scale was divided into various numbers of units, and the score of each subject was computed using each scale. As the number of intervals was increased up to about 12 reliability increased markedly. A less marked increase was manifested up to about 30 intervals, beyond which point there was a slight decrease. This curve does not correspond to that expected on the basis of Symonds' function for the

optimal number of scale divisions.—*E. E. Ghiselli* (Maryland).

5445. **Cole, L. E.** *General psychology*. New York: McGraw-Hill, 1939. Pp. xii + 688. \$3.50.—This introductory text endeavors to present fundamental problems of psychology, along with a variety of techniques, so that in spite of necessary selectivity "the student may gain a glimpse at least of the total field of endeavor." Although he attempts a sympathetic account of conflicting opinions, the author confesses an environmentalistic, behavioristic, and mechanistic bias. Chapter headings and approximate number of pages devoted to each topic follow: animism and brain psychology (18), the central nervous system and behavior (70), receptors (43), effectors (31), the problem of development (87), emotion (69), motivation (51), learning (71), perception (54), thinking (65), reasoning (43), intelligence (21), personality (41). There is a combined author and subject index of 24 pages. Throughout there is emphasis on experimental material.—*L. J. Stone* (Vassar).

5446. **Crissman, P.** *The operational definition of concepts*. *Psychol. Rev.*, 1939, 46, 309-317.—Operationism is criticized on the ground that (1) it proposes no new methods of investigation but merely redefines those already in use, and (2) it identifies the meaning of concepts exclusively with the operations performed by the operator irrespective of the relation to the thing operated upon or its nature. On the other hand operationism is defended for (1) its insistence on empirical methods, (2) its recognition of the relative character of scientific operations and results, and (3) its insistence on freeing concept definitions from mystic elements.—*A. G. Bills* (Cincinnati).

5447. **Crissy, W. J. E.** *The effect of partialling on two factor methods: Thurstone and Kelley (modified)*. *Psychol. Rec.*, 1939, 3, 138-144.—A study presenting a worked example of factorial analysis demonstrating the invariant nature of factor loadings, together with an attempt to show the effect upon factor loadings of partialling out a variable. "It would seem that the Thurstone method is likely to be less affected by partialling than the Kelley method, and it is also likely to yield weightings that are more invariant than the weightings yielded by the Kelley solution."—*P. S. de Q. Cabot* (Simmons).

5448. **Dewey, J.** *Theory of valuation*. *Int. Encycl. unified Sci.*, 1939, 2, No. 4. Pp. vii + 67. \$1.00.—The monograph is in 8 sections, and is largely devoted to critical examination of current theories. On the positive side, the viewpoint is advanced that values are attitudes attaching to means which are expected to mediate desired ends; the ends and means modify each other within the action sequence concerned; and ultimately values may be expected to depend rather directly upon physical propositions, as they now do in the more advanced technologies such as engineering and medicine. There is a selected bibliography of 25 items.—*R. R. Willoughby* (Brown).

5449. **Drever, J., & Good, T. S.** *William McDougall (1871-1938)*. *J. ment. Sci.*, 1939, 85, 615-618.—William McDougall's philosophical mind and outlook, scientific training, and laboratory experience enabled him to become one of the most influential figures in psychology and kindred fields. His activities were widely distributed, as his membership in various psychological, neurological, anthropological, sociological, medical, and philosophical societies indicates, and while his main interests and life's work were in psychology, he was an active contributor to scientific progress in other areas. His published work was voluminous, including some 20 books and more than 120 papers, reviews, articles, etc. Emphasis on purpose dominated the later periods of his thinking and resulted in the development not only of "hormic" psychology, but of his social psychology and abnormal psychology as well. The World War brought him widespread medical recognition for his work with shell-shock patients.—*D. G. Ryans* (William Woods College).

5450. **Edwards, A. S.** *New apparatus for the measurement of bodily movement*. *J. exp. Psychol.*, 1939, 25, 125-126.—Description with figure of a new apparatus for measuring movements of the waist while the subject stands at attention.—*H. W. Karn* (Pittsburgh).

5451. **Elsenhans, T.** *Lehrbuch der Psychologie*. (Textbook of psychology.) (3rd ed.) Tübingen: J. C. B. Mohr, 1937-1938. Pp. 588. RM 24.—The range is from biological to epistemological considerations, and the German literature is reviewed.—*R. C. Givler* (Tufts).

5452. **Fabritius, H.** *Bror Edvard Gadelius*. *Finska LäkSällsk. Handl.*, 1938, 81, 1177-1182.—Brief necrology depicting the life and works of Gadelius, who died April 12th this year at the age of 76. Portrait.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

5453. **Feuerborn, H. J.** *Zum Begriff der "Ganzheit" lebender Systeme*. (The concept of the "unity" of living systems.) *Naturwissenschaften*, 1938, 26, 761-771.—It is at present not justifiable to attribute Gestalt characteristics to certain physiological events, e.g. perception, because this would involve assumptions concerning processes as yet unexplained. No superordinated functional system has been shown to exist. The progress of the science of heredity rests on the development of fundamental causal relationships.—*P. L. Krieger* (Leipzig).

5454. **Fisher, R. A.** *The comparison of samples with possibly unequal variances*. *Ann. Eugen. Camb.*, 1939, 9, 174-180.—A discussion and defense of a treatment of data in which it is assumed that the variances are unequal. This supports the earlier work of Behrens, 1929, and of Sukhatme, 1938.—*J. W. Dunlap* (Rochester).

5455. **Gottschaldt, K.** *Phänogenetische Fragestellungen im Bereich der Erbpsychologie*. (Phenogenetic problems concerned with heredity in psychology.) *Z. indukt. Abstamm.- u. Vererb. Lehre*, 1939, 76, 118-157.—Intelligence is the expression of the

totality of the mental structure on the basis of emotions and drives. Even in the pre-logical actions of the child and primitive man the more capable can be distinguished. The question concerning the character of a personality can be restated as one concerning its social attitude and the quality of its emotional life. For the study of heredity, personality is not merely a sum of characteristics, because it also involves structural integration, which consists of progressive centralization and differentiation with special emphasis on qualitative differences. In this process emotions and drives are replaced by consciousness and volition as motivating forces. Since mental characteristics constitute dynamic processes manifest in certain environmental situations rather than ready-made conditions, the study of heredity in psychology encounters methodological obstacles. Jaensch's typology is a necessary step in the development of psychology, but not a final solution, since it results from a phenomenological rather than a biological-empirical analysis based on the facts of heredity.—P. L. Krieger (Leipzig).

5456. Hecht, S., & Shlaer, S. An adaptometer for measuring human dark adaptation. *J. opt. Soc. Amer.*, 1938, 28, 269-275.—An instrument is described with which one can measure the course of human visual dark adaptation under specified but flexible conditions useful for physiological and clinical investigation. The pre-adapting light adaptation is controlled in brightness, retinal location, and duration, and the subsequent dark adaptation of a specific retinal area is measured with light flashes whose spectral composition and duration are controlled.—R. J. Beitel, Jr. (American Optical Company).

5457. Heider, F. Environmental determinants in psychological theories. *Psychol. Rev.*, 1939, 46, 383-410.—The same group of data can often be analyzed in terms of several alternative relevant determinants. To escape this dilemma, one kind of determinant is often selected as primary, and an attempt is made at derivation of the existence of the other relevant ones from it. Derivation by selection is common, and a priori rather than empirical reasons may decide which determinant is chosen. For psychological theory, the rivalry between proximal and distal determinants is important. Theories using the former must explain the existence of relevant distal determinants, which they often do, by the device of derivation by selection. But the apparent success of these derivations is due to the unnoticed introduction of distal determinants into their assumptions; and theories using the latter must explain the fact of relevant proximal determinants. Gestalt theory has concepts which take both into account, but consistent use has not yet been made of these concepts.—A. G. Bills (Cincinnati).

5458. Holzlöhner, E., & Trurnit, H. J. Ein neues Verfahren zur unmittelbarer Analyse von Galvanometerkurven bei thermoelektrischen Mes-

sungen. (A new method for the direct analysis of galvanometric records in thermo-electric measurements.) *Z. Biol.*, 1937, 98, 89-98.—The mathematical method, proposed by Hill and Hertree, requires a great amount of work, which renders the precise analysis of phenomena of long duration impossible, and permits, furthermore, the introduction of a personal factor. The authors propose to replace it by an objective procedure, which consists in heating the dead medulla by an electric current after the completion of the experiment. The current employed in this heating is regulated in such a manner as to require the deflection of the galvanometer to follow the records obtained during the experiment proper, which are unrolled at the speed employed when they were originally made. The variations of the current, independently recorded, represent the true thermal phenomena.—(Courtesy *Année psychol.*).

5459. Juler, F. A. A projection scotometer. *Brit. J. Ophthalm.*, 1939, 23, 239-242.—The author describes an apparatus for central field investigation consisting of a gray tangent screen and a suitable projector for the projection of illuminated test objects.—R. J. Beitel, Jr. (American Optical Company).

5460. Jung, R. Eine elektrische Methode zur mehrfachen Registrierung von Augenbewegungen und Nystagmus. (An electric method for the multiple registration of eye movements and nystagmus.) *Klin. Wschr.*, 1939, 18, Teil 1, 21-24.—P. L. Krieger (Leipzig).

5461. Kantor, J. B. Interbehavioral psychology and scientific operations. *Kwart. psychol.*, 1939, 11, 1-25.—The dual ideology of objective and subjective in modern science is criticized. Psychology as a natural science has as its subject matter the interbehavior of organisms with objects and events. Scientific work is a particular kind of interbehavior with phenomena. The relation of interbehaviorism to cultural limitations (conventions), language, mathematics, and the logic of science is discussed.—T. M. Abel (New York City).

5462. Kennedy, F. The organic background of mind. *Med. Rec., N. Y.*, 1939, 150, 51-56.—General discussion is given of human behavior, physical, intellectual and emotional, in direct relation to the brain with its interrelationships with the various other organs of the body, and emphasis is placed upon the present level of normal human development, evolutionary development, and the significant effect upon behavior of acquired pathological conditions. Illustrative clinical material is cited to clarify various points.—M. H. Erickson (Eloise Hospital).

5463. Kolosvári, G. de. Miscellanea psicologica animalica. II. (Miscellanea in animal psychology. II.) *Riv. Biol.*, 1938, 26, 184-188.—The author gives a series of 14 observations on the behavior of certain animals under particular conditions and stimuli. Among the animals studied were the gull (*Larus ridibundus*), earwigs (*Forficulae*), mole rat

(*Spalax hungaricus*), stag beetle (*Lucanus cervus*), beetle (*Cerambyx cerdo*), *Pterygistes noctula*, robin (*Turdus merulae*), cat, mule, fox, hare, and dormouse (*Glis glis*).—*R. Ricci* (Rome).

5464. Miles, W. R. Performance of the Einthoven galvanometer with input through a vacuum tube microvoltmeter. *J. exp. Psychol.*, 1939, 24, 76-90.—In a study of the steady bio-electrical potentials found in the human eye the author sought a sensitive and rapidly acting direct-current measuring instrument. It was essential that the measured potentials should be uninfluenced by the resistance at the electrodes and by current drainage. The problem was solved by employing an Einthoven galvanometer in a circuit which included a vacuum-tube microvoltmeter as input, thus causing the string galvanometer to perform as an electrometer. The discussion includes: a review of the characteristics of the string galvanometer, and brief mention of some earlier applications of electron tubes to use with this instrument; a description of the circuit developed in the present research; a presentation of illustrative records; and a discussion of the performance characteristics of the string galvanometer used as an electrometer.—*H. W. Karn* (Pittsburgh).

5465. Mises, R. v. Probability, statistics and truth. New York: Macmillan, 1939. Pp. xvi + 323. \$3.75.—The first edition of 1928 is here extended and brought up to date. This book is for non-mathematicians, avoiding the use of formulas and the discussion of problems not readily amenable to non-mathematical treatment. The author aims to offer only a systematic description of certain classes of natural phenomena in the manner of the exact sciences, repudiating all "empty phrases" of metaphysics, and avoiding the error of exaggerated rationalism by restricting the application of "probability." His notion of the "collective" (a sequence satisfying certain conditions of randomness) is fundamental in this theory. The six lectures are: (I) the definition of probability, (II) the elements of the theory of probability, (III) critical discussion of the foundations of the new theory of probability, (IV) the laws of large numbers, (V) applications in statistics and the theory of errors, (VI) problems of statistical physics.—*A. A. Bennett* (Brown).

5466. Parker, G. H. Biographical memoir of William Morton Wheeler, 1865-1937. *Biogr. Mem. nat. Acad. Sci.*, 1938, 19, 203-241.—The author reviews the academic career of Wheeler in entomology and embryology. A chronological bibliography of his papers (463 titles) is included. Portrait.—*N. R. Barilett* (Brown).

5467. Pollack, B. Latent forces affecting human behavior. *Med. Rec., N. Y.*, 1939, 150, 56-58.—Discussion is given of the various forces playing a significant role in the behavior of both normal and psychotic persons. For both types the importance of unconscious elements is great, but the degree of awareness of these forces varies greatly. Both normal and abnormal behavior have essentially the same psychodynamics, and the external result is a

compromise of the conscious and unconscious forces, the latter being the more prominent in psychotic patients.—*M. H. Erickson* (Eloise Hospital).

5468. Pressey, S. L., Janney, J. E., & Kuhlen, R. G. Life: a psychological survey. New York: Harper, 1939. Pp. xxxiii + 654. \$2.50.—The book is divided into 3 parts. Part I presents a sweeping survey of the socio-economic and cultural environment of modern life, with enough historical perspective to give some sense of the rapidity of recent changes. Three chapters (the gross statistics of life, conditions and opportunities of life, and the invisible environment—culture) constitute this part. Part II describes development through the life span. More than usual stress is placed on the adult years, because college students are interested in the years before them. Chapter titles are: physical growth and decline, the growth and decline of mental abilities, the development and change of interests with age, the course of the social life, the work life, the development and changes in attitudes, character, life philosophy, and finally, the individual. Part III is devoted to the problems of life: efficiency, adjustment, and life plan. The text is liberally sprinkled with tables and graphs. Chapters are followed by lists of from 20 to 83 titles, usually more than 50.—*J. McV. Hunt* (Brown).

5469. Reyer, W. Organische Psychologie. Grundriss einer psychischen Anthropologie. (Organic psychology. Outline of a psychical anthropology.) *Neue dtsch. Forsch., Abt. Charakterol.*, 8. Berlin: Junker & Dünhaupt, 1939. Pp. 162. RM. 7.—Consciousness, which operates through directing its sensory apparatus toward objects, is concerned with meanings, the mind with feeling. Feeling was originally a condition of the activity of the self, traceable in inner experience. Mental activity is neither parallel nor causal to bodily activity. Viewed from without the two domains persist, but this division is foreign to the activity of the self. Life force is the biological basis of character, which acquires its mental coloration through emotionality and is expressed through temperament.—*P. L. Krieger* (Leipzig).

5470. Salisbury, F. S. Human development and learning. New York: McGraw-Hill, 1939. Pp. xvii + 513. \$3.00.—The author interprets psychology for the beginning student, taking into account conflicting points of view and attempting to bring together theory and practice. An organismic approach is adopted. 18 chapters comprise the volume: Introduction; We Live and Learn; Human Development Before Birth; How Is Behavior Controlled? Relations with Environment; Emotional Behavior; Development of Intelligent Behavior and Conscious Experience; Organization in Learning and in Conscious Experience; The Thought Processes; Conservation of Experience; Thinking and Learning Take Direction; Factors that Influence Learning; The Inheritance of Individuality; Interpreting Individual Differences; Emotional Control and Social Behavior; Personality; Esthetic Experience and the

Creative Life; and The Larger View.—*D. G. Ryans* (William Woods College).

5471. **Sanborn, H.** *An examination of William Stern's philosophy.* *Character & Pers.*, 1939, 7, 318-330.—Stern interprets the relation between science and life, between person and things, in terms of a critical personalism. It includes within it a synthetic unity of the dualism of teleology and mechanism. This unification is effected, after analysis and synthesis are complete, by a third method which Stern calls critical hypostasis. Various philosophical categories are discussed to illustrate the functioning of this process.—*M. O. Wilson* (Oklahoma).

5472. **Schiller, K.** *Einrichtung zum automatischen Ein- und Ausschleichen galvanischer Ströme.* (Apparatus for the automatic control of increasing and decreasing galvanic currents.) *Z. Biol.*, 1937, 98, 337-346.—The apparatus, based on the principle of the saturation of anodal currents, permits the control, in advance, of the initial strength, the rate of increase, and the final strength of a current. The variations due to polarization of the preparation are automatically compensated.—(Courtesy *Année psychol.*).

5473. **Shimp, B.** [Ed.] *The journal of musicology.* Greenfield, Ohio: Music Science Press. Vol. 1, No. 1, May, 1939. Quarterly. \$2.00 per year.

5474. **Teoderescu, C. A., & Niculescu, F.** *Manual de psihologie.* (Manual of psychology.) Bucharest: Cugetarea, 1935. Pp. 319.

5475. **Thomson, G. H.** *The factorial analysis of human ability.* Boston: Houghton Mifflin, 1939. Pp. xv + 326. \$3.75.—The purpose of this book is to set forth the theory underlying factorial analysis in terms intelligible to the layman; the appendix contains a concise mathematical treatment. The book is divided into 5 parts. The first part deals with the analysis of tests, and contains 5 chapters. The second section, consisting of 3 chapters, treats the estimation of factors. The next 4 chapters (Part 3) deal with the influence of sampling. Correlation between persons instead of tests is the subject matter of the fourth part. The last 5 chapters, approximately a third of the book, are devoted to the interpretation of factors.—*J. W. Dunlap* (Rochester).

5476. **Vaughan, W. F.** *General psychology.* (2nd ed.) New York: Doubleday, Doran, 1939. Pp. xxi + 745. \$3.00.—In this as in the older edition the treatment is confined to human psychology and is approached from a synoptic point of view. Avowed purposes are to acquaint the student with fundamental facts and theories, to inform him of the scope of psychology and of the scientific techniques employed, and to encourage interest in advanced courses in the field. The book has been reorganized and much rewritten. Considerable new material has been added. Extensive use is made of diagrams, charts, and sketches. Chapter summaries are provided. A 17-page glossary of technical terms is

appended. Chapter headings: Psychology—Unscientific, Prescientific, and Scientific; Points of View; Sensory Equipment; The Nervous System; Motor Equipment; Human Urges and Motivation; Mental Conflict; The Formation of Habits; Attending and Perceiving; Remembering and Anticipating; Thinking; Intelligent Adjustment; Measurement of Personality; and Personality and Social Living.—*D. G. Ryans* (William Woods College).

5477. **Wehberg, H.** *Films of everyday life.* New York: Metropolitan Motion Picture Council, 100 Washington Square, 1938. Pp. 61. \$0.50.—This catalog contains an annotated bibliography of 236 silent and sound films, both 16 and 35 mm, on current social problems. Separate sections are devoted to civil liberties, consumers and co-operatives, crime prevention, culture patterns, marriage and the family, mental hygiene, racial relations, religion and the community, social service, unemployment, vocational training, war and peace, youth, and others.—*L. F. Beck* (Oregon).

5478. **Werz, R. v., & Verleger, R.** *Ein einfaches Verfahren der zahlenmässigen Bewertung sedativer Effekte.* (A simple procedure for the quantitative evaluation of sedative effects.) *Arch. exp. Path. Pharmak.*, 1939, 192, 292-299.—The authors have modified Forst's procedure for studying sedative effects in mice placed on a smoked platform by adding a measure of the "white content" of the surface.—*P. L. Krieger* (Leipzig).

5479. **Wolff, F. F.** *Concept, percept, and reality.* *Phil. Rev.*, N. Y., 1939, 48, 398-414.—Much contemporary philosophy views the concept as a pointer toward objectives that are sensational. The concept is said to be true if it leads to a percept. The author challenges percepts as resting points. To him a percept is valuable only as a mediative agent leading to a concept. Ultimate reality is given in immediacy, not in mediate processes. All philosophies (including pragmatism) are based on indefinables. Divergences are due to incongruity in the sets of indefinables recognized by different men. When writings appear meaningless, the real difficulty is in incongruities between indefinables assumed in the discourse and those recognized by the reader. Indefinables cannot be communicated. They must be directly apprehended. Nirvana is practically an indefinable. The only possible cognitive definition is in negative terms. The affective quality of Nirvana, however, is positive. It is a state of bliss, peace, and benevolence. A number of Buddhists have attained it by ethical discipline. The author attained it by a cognitive technique.—*M. F. Martin* (Northampton State Hospital).

5480. **Zanten, J. H. v.** *Leerboek der statistische methode.* (Textbook of statistical method.) (3rd ed.) Alphen: Samson, 1938. Pp. 396. Gld. 7.25.—The first part of this volume contains a history of statistics and a description of its nature, purpose, foundation, and methods. In the second part applications in special fields are discussed. New additions in the third edition include calculations of

population trends, consumption and distribution of foodstuffs, and nutritional status. The discussion of the statistical treatment of data concerning education and traffic conditions has been revised, and important additions have been made to those concerning migration, income, prices, family budgets, unemployment, culture, and public finance.—*H. Beaumont* (Kentucky).

[See also abstracts 5525, 5583, 5764, 5823, 5849, 5942, 5945.]

NERVOUS SYSTEM

5481. Beecher, H. K., & McDonough, F. K. Cortical action potentials during anesthesia. *J. Neurophysiol.*, 1939, 2, 289-307.—Brain potentials were recorded from the sensory cortex of the cat under the influence of 17 anesthetic agents. High frequencies are associated with highly volatile agents and low frequencies with stable anesthetics. The pattern and frequencies with non-volatile anesthetics are similar to those of normal sleep. In general, during light anesthesia with volatile agents sciatic nerve stimulation increases the amplitude of cortical potentials; with non-volatile agents there is no effect. Stimulation is without effect under deep anesthesia.—*M. A. Rubin* (Worcester State Hospital).

5482. Berger, H. [The electro-encephalogram in man.] *Allg. Z. Psychiat.*, 1938, 108, 254-273.

5483. Berry, R. J. A. Your brain and its story. New York: Oxford University Press, 1939. Pp. 184. \$2.50.

5484. Bremer, F., & Dow, R. S. The acoustic area of the cerebral cortex in the cat. A combined oscillographic and cytoarchitectonic study. *J. Neurophysiol.*, 1939, 2, 308-318.—The auditory projection area of the cat is thought to be composed of the upper part of the sylvian gyrus, the posterior part of the anterior ectosylvian gyrus, and the middle ectosylvian gyrus.—*M. A. Rubin* (Worcester State Hospital).

5485. Day, R., Smith, J. R., & Klingman, W. O. Tests of function of vegetative nervous system in acrodynia. *Amer. J. Dis. Child.*, 1939, 57, 269-277.—A clinical procedure is described which demonstrates graphically the hypertonicity of the sympathetic division of the vegetative nervous system in patients with acrodynia and the absence of this hypertonicity after recovery.—(*Child. Developm. Abstr.* XIII: 780).

5486. Diebschlag, F. Beobachtungen und Versuche an intakten und grosshirnlosen Eidechsen und Ringelnattern. (Observations and experiments on intact and decerebrate lizards and ringed snakes.) *Zool. Anz.*, 1938, 124, 30-40.—The locomotion of reptiles deprived of the forebrain is the same as that of intact animals. They lie inanimate, however, for hours with closed eyes. Spontaneity is dependent on the posterior ventral third of the forebrain. Decerebrate animals do not feed. They can see,

but perception gives rise to no movements, and to neither flight nor fear reactions. They do not hide or seek sunny spots. After removal of the roof of the forebrain, green lizards show neither an aggressive nor a submissive reaction. Their associative power for colors does not depend on the roof of the forebrain. Unilateral removal of the forebrain does not affect normal color association. Probably the capacity for association of forms does not depend on the roof of the forebrain.—*P. L. Krieger* (Leipzig).

5487. Dussier de Barenne, J. G., & McCulloch, W. S. Factors for facilitation and extinction in the central nervous system. *J. Neurophysiol.*, 1939, 2, 319-355.—The factors for facilitation in the central nervous system are hyperactivity, negative voltage drift, and probably increase in pH. Those for extinction are hypoactivity, positive voltage drift, and decrease in pH. Latency, amplitude, and threshold of response to stimulation can be explained in terms of these factors. The findings are discussed in relation to the problem of reciprocal innervation.—*M. A. Rubin* (Worcester State Hospital).

5488. Herrick, C. J. The brains of *Amblystoma punctatum* and *A. tigrinum* in early feeding stages. *J. comp. Neur.*, 1938, 69, 391-426.—Specimens of *A. punctatum* were arranged on the basis of progressive differentiation of behavior and structure from first motility to feeding stages. With these specimens suitable brains of *A. tigrinum* have been compared, especially with reference to brain development at the feeding stage. It is found that the brain of *A. tigrinum* is less differentiated, on the whole, at the different anatomical stages than that of *A. punctatum*. The retardation is most notable in the region of the isthmus and cerebellum, which probably accounts for slower development of limbs and walking movements in this species.—*C. P. Stone* (Stanford).

5489. Hinsey, J. C., Hare, K., & Phillips, R. A. Sensory components of the phrenic nerve of the cat. *Proc. Soc. exp. Biol., N. Y.*, 1939, 41, 411-414.—"By degeneration of the somatic motor and sympathetic fibres in the phrenic nerve of cats it has been shown histologically that the nerve contains myelinated sensory fibres of different sizes and unmyelinated ones. The ratio of unmyelinated to myelinated sensory fibres is relatively high in 2 of the 3 phrenic nerves studied as compared to that reported for a motor branch of the femoral nerve." Action potentials from the left phrenic nerve of one cat showed the velocity of conduction in the fastest fibre to be 63 m.p.s. with a slow wave about 20 m.p.s. velocity. No "C" spike was observed.—*H. Peak* (Randolph-Macon).

5490. Hoagland, H., Himwich, H. E., Campbell, E., Fazekas, J. F., & Hadidian, Z. Effects of hypoglycemia and pentobarbital sodium on electrical activity of cerebral cortex and hypothalamus (dogs). *J. Neurophysiol.*, 1939, 2, 276-288.—Potential changes in the hypothalamus of the dog are more resistant to the effects of insulin hypoglycemia than

are those in the cerebral cortex, and recover sooner than the cortex after administration of glucose. Nembutal in anesthetic amounts, although increasing amplitude and decreasing frequency of the cortical potentials, does not influence hypothalamic rhythms. Increasing hydrostatic pressure by as much as 16 times normal pressure did not affect the electrical activity of the cerebral cortex.—*M. A. Rubin* (Worcester State Hospital).

5491. Hoffmann, P. **Die Leistungen des Nervensystems bei der Motorik.** (The capacities of the nervous system in motility.) *Klin. Wschr.*, 1939, 18, Teil 1, 73-77.—On the basis of Rijlant's results, Hoffmann discusses the fact that in many voluntary innervations a constant rhythm is observed, although the individual ganglion cells discharge asynchronously and with a much slower rhythm. He also takes up the vegetative innervation of the musculature and the neurohumoral propagation of irritability.—*P. L. Krieger* (Leipzig).

5492. Jacobsen, C. **The effects of extirpations on higher brain processes.** *Physiol. Rev.*, 1939, 19, 303-322.—A review.—*M. A. Rubin* (Worcester State Hospital).

5493. Janzen, R. **Hirnbioelektrische Untersuchungen über den physiologischen Schlaf und den Schlafanfall bei Kranken mit genuiner Narkolepsie.** (Bio-electric studies on the brain concerning physiological sleep and the onset of sleep in patients with genuine narcolepsy.) *Dtsch. Z. Nervenheilk.*, 1939, 149, 93-106.—*P. L. Krieger* (Leipzig).

5494. Janzen, R., & Kornmüller, A. E. **Hirnbioelektrische Erscheinungen bei Änderungen der Bewusstseinslage.** (Bio-electric brain manifestations in changes of mental set.) *Dtsch. Z. Nervenheilk.*, 1939, 149, 74-92.—*P. L. Krieger* (Leipzig).

5495. Jung, R., & Kornmüller, A. E. [A method of recording localized electrical potentials in subcortical regions of the brain.] *Arch. Psychiat. Nervenkr.*, 1938, 109, 1-30.

5496. Kayser, H. W. **Hinterwurzelpotentialie bei Muskeldehnung.** (Posterior root potential in muscle stretching.) *Z. Biol.*, 1939, 99, 488-505.—The impulses produced by muscle stretching, which run separately and irregularly in the nerve, are transformed into synchronized rhythmical undulating impulses in the spinal ganglion. This change does not occur first in the posterior roots, which do not differ histologically from a peripheral sensory nerve. The meaning of synchronization for proprio reflexes is examined. Synchronization is not effected through a synapse in the ganglion. The possibility of fiber synchronization is advanced.—*P. L. Krieger* (Leipzig).

5497. Kayser, H. W. **Beziehungen zwischen sensibler und motorischer Skelettmuskelnervation.** (Relations between sensory and motor innervation of skeletal muscle.) *Z. Biol.*, 1939, 99, 506-513.—After the severing of peripheral nerves, sensory impulses from the muscles can be demonstrated until degeneration of the nerve is complete. The sensory

nerve endings remain irritable longer than the motor. After cutting through the posterior roots, the sensory muscle impulses in the peripheral nerves decrease in the course of the degeneration. Severing the anterior roots also diminishes the sensory impulses, because the irritability of the end-organs, which are still capable of functioning, declines. It is to be assumed that severing of the anterior as well as the posterior roots finally extinguishes muscle sensibility.—*P. L. Krieger* (Leipzig).

5498. Langworthy, O. R., & Rosenberg, S. J. **Control by the central nervous system of rectal smooth muscle.** *J. Neurophysiol.*, 1939, 2, 356-360.—Evidence is presented for a mechanism in the mid-brain which controls the tone of smooth muscle of the rectal wall.—*M. A. Rubin* (Worcester State Hospital).

5499. Lashley, K. S. **The mechanism of vision. XVI. The functioning of small remnants of the visual cortex.** *J. comp. Neur.*, 1939, 70, 45-67.—Rats were tested for detailed vision after the entire right and a large part of the left striate area of the visual cortex had been removed. With only one fiftieth of the neurones normally present in each geniculate nucleus remaining in the geniculo-striate system, the rats still could discriminate visual figures. This was true even when the small remnant of tissue was immediately adjacent to an extensive lesion. The results argue against assigning defective functioning to trophic changes in residual tissue following cortical operations.—*C. P. Stone* (Stanford).

5500. Lowenbach, H. **The electroencephalogram in healthy relatives of epileptics.** *Johns Hopkins Hosp. Bull.*, 1939, 65, 125-137.—Lowenbach studied the brain waves of 37 normal relatives of epileptic individuals. 17 so-called normal relatives exhibited waves which were slow and irregular, and which had high or uneven amplitudes. 3 of these persons had outright 3-per-sec. spike-and-wave groups which are regarded as characteristic of petit mal. The author discusses these abnormal findings and feels that these are expressions of an inherited instability of the central nervous system. A pair of twins (identical) showed the same type of electroencephalographic recordings. Lowenbach feels that some other unknown factors have to be present in order to justify the clinical diagnosis "epilepsy."—*W. Marshall* (Appleton Clinic, Wis.).

5501. Mäurer, H. **Über encephalographische Befunde bei Schwachsinnigen.** (Encephalographic findings with feeble-minded patients.) *Med. Welt*, 1939, 13, 699-704.—The encephalograph may uncover the causes of feeble-mindedness only in the case of extreme conditions (hydrocephalus, etc.).—*P. L. Krieger* (Leipzig).

5502. Parker, G. H. **The neurohumoral activation of vertebrate chromatophores.** *Science*, 1939, 89, 400.—Abstract.

5503. Rosenfeld, M. **[Sympathetic systems and their relation to psychic disturbances.]** *Mschr. Psychiat. Neurol.*, 1938, 100, 137-173.

5504. Ross, D. A., & Schwab, R. S. The cortical alpha rhythm in thyroid disorders. *Endocrinology*, 1939, 25, 75-79.—A correlation of .668 between the cortical alpha rhythm and the metabolic state was obtained from determinations made upon a group of patients with thyroid disorders (12 myxedemics and 22 hyperthyroids).—W. J. Brogden (Wisconsin).

5505. Rubin, M. A., & Cohen, L. H. A variability study of the normal and schizophrenic occipital alpha rhythm. II. The electro-encephalogram and imagery type. *J. ment. Sci.*, 1939, 85, 779-783.—Visual and auditory imagery which are characteristic of normal individuals appear to be supplanted in schizophrenic patients by kinesthetic and tactual-temperature imagery. At the same time schizophrenics show more than normal variability of electro-encephalograms. In this investigation it was found that the *per cent time alpha* for patients of kinesthetic imagery-type is the same as that for normal individuals, but that their day-to-day variability is twice as great. The *per cent time alpha* for the tactual-temperature imagery-type is significantly lower than that of normal individuals, but their day-to-day variability is practically the same. It appears possible that the lability of nervous system activity is different under different conditions of schizophrenic psychosis.—D. G. Ryans (William Woods College).

5506. Sommer, J. Über das Refraktärstadium des menschlichen Rückenmarks. (The refractory period of the human spinal cord.) *Z. Biol.*, 1939, 99, 514-526.—The refractory period of the proprio-reflex arc occurs in the motor cells of the anterior horn. Since this arc and the path of voluntary innervation of skeletal muscle have a final common path in the anterior horn cells and their axons, the above conclusion holds also for voluntary innervation. The proprio-reflex stimulus does not remain limited to the anterior horn cells affected by it, but spreads to all the neurons of the muscle center. The absolutely refractory stage in proprio-reflex arcs is not constant, but depends on facilitation. It is twice as long in the lower extremity as in the upper. Every muscle and facilitation has a maximal frequency which cannot exceed, even in voluntary innervation, the motor unity in question. The apparent relative refractory period shows under caffeine a characteristic decrease and advancement of the rebound.—P. L. Krieger (Leipzig).

5507. Thauer, R., & Peters, G. Untersuchungen zur Physiologie des Mittelhirns. (On the physiology of the midbrain.) *Pflüg. Arch. ges. Physiol.*, 1939, 242, 54-78.—M. A. Rubin (Worcester State Hospital).

5508. Tokaji, E., & Gerard, R. W. Avitaminosis B₁ and pigeon brain potentials. *Proc. Soc. exp. Biol., N. Y.*, 1939, 41, 653-655.—Pigeons were standardized on a stock diet for 30 days, then on a diet of polished rice and salt. Though deficient in other nutritional elements, it was thought that as a result of this diet only B₁ deficiency could play a role within the time limits. Potentials were led off from

one exposed occipital region where one electrode was placed, the indifferent electrode lying on the bone of the opposite side. Potentials from avitaminous brain were more regular than normal potentials, the fastest rhythm being unchanged and the slower being increased in amplitude. Normal brain potentials are uninfluenced by administration of vitamin B₁. In avitaminous pigeons symptoms disappeared and reversion of potentials to normal occurred within 2 hrs. of injection of 2-5 mg. crystalline B₁.—H. Peak (Randolph-Macon).

5509. Umrath, K. Über das absolute Refraktärstadium nach zwei rasch aufeinanderfolgenden Erregungen. (The absolute refractory stage following two stimuli at short intervals.) *Z. Biol.*, 1939, 99, 477-483.—In the rectum of *Rana esculenta*, which has an induced absolute refractory period of 15-30 sec., an autogenous absolute refractory stage of 0.001-0.015 sec. was determined. Two stimuli in quick succession increase the autogenous absolute refractory period of the rectum, of striped muscle, and of the nerve-muscle preparation of the frog. By this method the corresponding findings were extended to other preparations and the theory of autogenous and induced refractory periods supported.—P. L. Krieger (Leipzig).

5510. Ury, B., & Gellhorn, E. Role of the sympathetic system in reflex dilatation of pupil. *J. Neurophysiol.*, 1939, 2, 268-275.—The role of the autonomic nervous system in dilatation of the pupil of the cat was studied by observing the normal, parasympathectomized, and sympathectomized eye. It is concluded that dilatation in response to pain is almost entirely due to parasympathetic inhibition, although under certain conditions the sympathetic division may contribute to the dilatation.—M. A. Rubin (Worcester State Hospital).

5511. Welsh, J. H., & Haskin, H. H. Chemical mediation in crustaceans: III. Acetylcholine and autotomy in *Petrolisthes armatus* (Gibbes). *Biol. Bull. Woods Hole*, 1939, 76, 405-415.—A single stimulus to each of the walking legs and chelae of the anomuran *Petrolisthes armatus* was found to cause in most specimens the autotomy of four or more of these eight appendages. Injection of acetylcholine in relatively high concentrations caused the autotomy of one to several legs without further stimulation. The injection of eserine never caused legs to be dropped unless they were stimulated. Atropine caused a lowering of general excitability and in relatively high concentrations completely prevented autotomy. The injection of adrenalin was followed by a reduction in the percentage of autotomies of each of the eight legs. The evidence obtained is interpreted as indicating that acetylcholine normally plays a role in the autotomy reflex of *Petrolisthes*, probably by acting as a mediator of impulses between the motor nerve and autotomizer muscle of a leg.—W. J. Brogden (Wisconsin).

[See also abstracts 5538, 5548, 5606, 5620, 5627, 5628, 5645, 5687, 5722, 5740, 5744.]

RECEPTIVE AND PERCEPTUAL PROCESSES

5512. Abramson, E., & Oeigaard, H. The prevalence of dysadaptation in public elementary schools for children at Djursholm. *Skand. Arch. Physiol.*, 1939, 82, 49-60.—"In an investigation of dark adaptation with the aid of the biophotometer on 67 children in four lower classes . . . 19, or 28%, were found to be normal according to the norms of Jeans and Zentmire. By the administration of vitamin A to 22 children the adaptation figures were appreciably improved in the majority of cases. Attention was attracted to the fact that an age influence probably exists and that higher, i.e. worse, adaptation figures are regularly obtained in the younger ages. The differences between first and second examinations are in the main levelled out at the age of 10 years."—P. L. Krieger (Leipzig).

5513. Andreyev, A. M., Bronstein, A. I., & Gershuni, G. V. [The action of alternating currents on an ear lacking the tympanum.] *Fiziol. Zh., S.S.S.R.*, 1937, 22, 53-61.—A study of the action of currents ranging from 1000 to 4000 c.p.s. on an ear lacking the structures of the middle ear. There is no difference in the effects produced on this ear and the normal ear of the same subject, except that in supraliminal measurements a greater relative increase in the intensity of the current is required to produce a given increase in loudness in the damaged ear. The authors ascribe this to a cochlear reverberation.—(Courtesy *Année psychol.*).

5514. Anson, B. J., Karabin, J. E., & Martin, J. Stapes, fissula ante fenestram and associated structures in man: II. From the fetus at term to the adult of seventy. *Arch. Otolaryngol., Chicago*, 1939, 29, 939-973.—W. J. Brogden (Wisconsin).

5515. Auersperg, A. Schmerzproblem und vegetatives Nervensystem. (The problem of pain and the vegetative nervous system.) *Wien. klin. Wschr.*, 1938, 51, 2. Abt., 1076-1080.—Pain cannot be localized either in the voluntary or in the vegetative system. Its functional structure changes with the functional orbit in which the sensation of pain occurs.—P. L. Krieger (Leipzig).

5516. Bárány, E. Electrical stimulation of the cochlea. *Nature, Lond.*, 1937, 139, 632.—If the external auditory canal is filled with a saline solution into which an electrode is dipped, stimulation by alternating current produces an auditory tonal sensation which may be combined with the sensation produced by a tuning fork whose vibrations are transmitted by bone conduction.—W. S. Verplanck, Jr. (Brown).

5517. Bartlett, N. R., & Gagné, R. M. On binocular summation at threshold. *J. exp. Psychol.*, 1939, 25, 91-99.—"Three experiments are reported in which monocular and binocular intensity thresholds have been determined for the fovea, under constant conditions of light- and dark-adaptation. Special effort was made to control fixation conditions. No evidence is found for the existence of foveal binocular summation at threshold."—H. W. Karn (Pittsburgh).

5518. Bartley, S. H. Some factors in brightness discrimination. *Psychol. Rev.*, 1939, 46, 337-357.—No simple relation exists between sense-cell discharge and the quantitative aspects of the final sensation. (1) There are three distinct types of discharge in the optic nerve fibers. (2) The functional units of the eye cannot respond fast enough for the eye as a whole to react to rapid flashes. They must react alternately, and this may account for the irregular size of responses to uniform flashes and the excessive and changing latencies, with increased flash frequency. (3) Flicker rate does not keep pace with flash rate. (4) Brightness discrimination in a flash series is distorted by a central neural rhythm. (5) Contours in the stimulus may fail to appear in the sensation. (6) Arrangement of contours in the stimulus affects the visibility of other contours or parts of the visual field.—A. G. Bills (Cincinnati).

5519. Beveridge, W. M. Some racial differences in perception. *Brit. J. Psychol.*, 1939, 30, 57-64.—African students show less phenomenal regression for brightness, more for whiteness, and therefore more discrimination between the two, than do British students. This tendency to phenomenal regression is reflected in African art, but it does not lead African students to prefer Oriental to European pictures. When the visual cues contradict the internal ones in the perception of the horizontal, most people make an unconscious mental compromise, but there are large individual differences in the amount of this. Africans seem to be less affected by visual cues than Europeans. This compromise has a positive correlation with age, with extravert temperament tendencies, and probably with phenomenal regression, but probably a negative one with intelligence.—M. D. Vernon (Cambridge, England).

5520. Bogoslovski, A. I. Diurnal changes in the electrical sensitivity of the eye. *Bull. Biol. Méd. exp., U.R.S.S.*, 1937, 3, 127-129.—Examined twice an hour between 9 a.m. and midnight, sensitivity to electrical stimulation changed in a parallel manner for 3 out of 4 subjects. Sensitivity, defined as the reciprocal of the threshold, increases up to noon, and then progressively diminishes to midnight. The amplitude of the mean variation extends from 100 to 170, where 100 is the reciprocal of the threshold measured in micro-amperes.—W. S. Verplanck, Jr. (Brown).

5521. Bogoslovski, A. I. Changes in the electrical sensitivity of the eye during visual activity. *Bull. Biol. Méd. exp., U.R.S.S.*, 1937, 3, 130-132.—In the course of work requiring visual effort (reading, sorting seeds, etc.), the sensitivity of the eye to electrical stimulation progressively diminishes through a period of two hours. It regains its original value (according to control experiments) after cessation of work in about half an hour. The author suggests that this phenomenon may be employed as a method of measuring visual fatigue.—W. S. Verplanck, Jr. (Brown).

5522. Bogoslovski, A. I. The effect of sound upon the electrical sensitivity of the eye. *Bull. Biol. Méd. exp., U.R.S.S.*, 1937, 3, 307-309.—5 subjects were stimulated through telephone receivers fixed on the ears with tones of 850 c.p.s. at different intensities. Under these conditions the electrical sensitivity of the eye is modified. It was found that during dark adaptation sensitivity was increased with simultaneous auditory stimulation when the intensity of the sound waves was moderate, and diminished when high intensities of sound were employed.—W. S. Verplanck, Jr. (Brown).

5523. Bourdon, B. Sensations extérieures par rapport au corps et sensations subjectives. (Sensations external with reference to the body and subjective sensations.) *J. Psychol. norm. path.*, 1939, 35, 5-19.—The author distinguishes between external and subjective as follows; external implies differences in position or spatial separation, while subjective applies to those sensations which can be localized on the surface or in the interior of the body. Subjectivity does not exclude externalness. After experimenting with all the senses he concludes that the character of externalness is not necessarily associated with one type of sensation, and points out especially the influence of the externality or subjectivity of one sensation upon those characteristics in another sense modality.—R. E. Perl (New York City).

5524. Bracken, H. v. Wahrnehmungstäuschungen und scheinbare Nachbildgrösse bei Zwillingen. (Perceptual illusions and apparent size of after-images in twins.) *Arch. ges. Psychol.*, 1939, 103, 203-230.—42 pairs of twins aged 7 to 41 were variously studied by means of the Müller-Lyer illusion, the Aubert phenomenon, and the projection of after-images at different distances. The statistical variations obtained give some evidence for hereditary determination of these perceptual functions, especially in the case of the Aubert phenomenon.—H. D. Spoerl (American International College).

5525. Brock, F. W. Anomalous projection in squint. Its cause and effect. New methods of correction. Report of cases. *Amer. J. Optom.*, 1939, 16, 201-221.—The author has designed an "anomoscope" with which to study cases showing good macular perception in both eyes with anomalous projection. The instrument consists of two sliding illuminated colored targets one above the other, each visible to only one eye when appropriate color filters are worn. In a dark room the subject aligns the two targets with the primary visual axes; then a cardboard with a central round opening is inserted at the crossing point of the two axes. Subjects with anomalous projection all reported two widely separated objects seen through two distinct holes; subjects with normal projection all saw a single opening with the targets vertically aligned. This difference must be explained as a difference in interpretation of visual impressions, and treatment would then consist in helping the subject to interpret two images falling on normally corresponding points as

representing a single object. This was accomplished by presenting at the crossing point of the visual axes targets which were seen in part only by either eye. Full stereopsis quickly followed success in unifying the two images.—M. R. Stoll (Ohio State).

5526. Brunzlow, —. Über das räumliche Hörvermögen und die Fähigkeit der Schall-lokalisierung. (Spatial auditory ability and capacity to localize sounds.) *Hals- Nas- u. Ohrenarzt*, 1939, 30, Teil I, 1-6.—Ability to localize sounds depends on the outer ear and is developed best in the higher animals. Man compensates for an immovable pinna by turning the head. The nature of the sound is a cue for localization and a change in the quality of the sound is of decisive significance.—P. L. Krieger (Leipzig).

5527. Bujas, Z. [The determination of the gustatory intensity of substances in solutions of different concentrations.] *Apotek. Vestn.*, 1937. Pp. 10.—The intensity of bitterness of different substances is of great importance in pharmaceutical practice, for it is the bitterness of a drug which determines, by the mediation of a conditioned reflex, the secretion of gastric juices. Thus it is necessary to examine various substances to determine their bitterness. The usual method of doing this by determining absolute thresholds is erroneous in that supraliminal concentrations are usually employed, and different drugs have different rates of increase of intensity of bitterness with increased concentration. The author determines the curves of increase in intensity of bitterness as a function of concentration. This method he considers superior in that it permits the comparison of the intensity of bitterness of different drugs in supraliminal concentrations.—(Courtesy *Année psychol.*).

5528. Bunge, E. Verlauf der Dunkeladaptation bei Sauerstoffmangel. (The course of dark adaptation during oxygen deficiency.) *Arch. Augenheilk.*, 1936, 110, 189-197.—After 15 minutes of light adaptation, the subject was placed in darkness and breathed a mixture containing 10% of oxygen. The dark-adaptation curve, taken on 7 subjects, was sharply reduced by oxygen deprivation, especially toward the 5th minute and after the 15th (threshold tripled). Some minutes after the end of deprivation, sensitivity rapidly recovered to the normal level: it would appear that the regeneration of visual purple had not been prevented. Adaptation curves were then taken on one subject following 15 minutes' inhalation of oxygen-deficient air during the light-adaptation period. These proved to be close to the normal curve; anoxemia had not diminished the destruction of the visual purple. If the oxygen lack was continued through the period of dark adaptation, there was obtained a recovery curve less reduced than those without previous deprivation. The existence of some compensatory mechanism may therefore be assumed. The author suggests that the oxygen deficiency may act upon chemical processes, the afferent pathways, or even the higher centers (weakening of consciousness).—(Courtesy *Année psychol.*).

5529. Canella, M. F. Azione degli stimoli luminosi sulla posizione d'equilibrio dei pesci. (Action of light stimuli on the equilibrium position in fish.) *Boll. Soc. ital. Biol. sper.*, 1937, 12, 177-179.—A study on the importance of the visual factor in equilibrium.—L. Canestrelli (Rome).

5530. Claparède, E. Sur une difficulté de la représentation somatesthésique de la giration du corps. (On a difficulty in representing bodily rotation somatesthetically.) *Arch. Psychol., Genève*, 1939, 27, 172-185.—Somatesthesia is the sensation of "being in one's body." The author observed, even when a child, that he was not able to imagine somatesthetically what he had done when he had made a complete rotation, such as looping the loop, performing a dangerous somersault, or revolving on a trapeze. He can easily imagine such a feat visually but not somatesthetically. He cannot succeed, in his somatesthetic representation, in connecting his present position with that maintained at the moment before performing the rotation. After a 360° rotation, the bodily image seems to have had a position other than in reality. The problem is one of disorientation, which the author cannot explain. Similar phenomena have been observed by other persons.—G. Dooretski (Geneva).

5531. Crozier, W. J., & Wolf, E. Temperature and critical illumination for reaction to flickering light. IV. *Anax* nymphs. *J. gen. Physiol.*, 1939, 22, 795-818.—M. A. Rubin (Worcester State Hospital).

5532. Davis, T. C., & Rommel, J. C. Treatment of deafness and contiguous disorders with prostigmine. *Arch. Otolaryngol., Chicago*, 1939, 29, 751-758.—Treatment with prostigmine rapidly restores the hearing of patients whose condition is acute; those whose condition is chronic require a longer time. The auditory acuity of a normal subject was increased by the injection of prostigmine.—W. J. Brogden (Wisconsin).

5533. Dethier, V. G. Taste thresholds in lepidopterous larvae. *Biol. Bull. Woods Hole*, 1939, 76, 325-329.—Taste thresholds were determined for two species of lepidopterous larvae, *Malacosoma dissimilis* Hbn. and *Apamea velata* Wlk., by presenting distilled water alternately with the test solutions. Thresholds are stated in terms of two concentrations, indicating in the case of sugars that the animals refused the lower and accepted the higher; in the case of acids, that the animals accepted the lower and refused the higher. On the whole, *A. velata* appeared more sensitive to taste substances than *M. dissimilis*, both to HCl and to various sugars. The order of sensitivity to the various sugars was the same for both species, namely, sucrose, fructose, dextrose, and lactose, in decreasing order of sensitivity.—W. J. Brogden (Wisconsin).

5534. Ellerbeck, P. Een geval van schijndoorheid. (A case of apparent deafness.) *Nijmegen-Utrecht: Dekker & van de Vegt*, 1939. Pp. 158.—A case study of a boy who was apparently deaf and dumb during the first four years of life, remained word-deaf until the age of seven, and showed agnosia for

the connection of symbols during the next three years. Though he could grasp individual words, phrases remained meaningless. He was normal organically and physiologically as well as in his sensory and motor reactions, and his intelligence and affective make-up were basically sound. The outstanding phenomenon was an impediment in the proper functioning of speech. Though interested in his sensory experiences, he did not speculate about their nature or meaning. This accounted for his slow reaction time. Words to him were functional symbols without intentionality. He failed to grasp the continuity of meaning inherent in a sentence. By giving special training in discovering relationships and in answering specific questions of a factual rather than affective nature, an apparently successful attempt was made to relieve this condition.—H. Beaumont (Kentucky).

5535. Folger, H. T. Reactions of tadpoles to light. I. Effect of chemicals on aggregation of tadpoles in unilateral illumination. *Physiol. Zool.*, 1939, 12, 136-150.—(*Biol. Abstr.* XIII: 7615).

5536. Franceschetti, A. Vererbung und Auge. (Heredity and the eye.) *Ophthalmologica*, 1939, 97, 203-260.—A survey of the literature including more than a hundred titles.—P. L. Krieger (Leipzig).

5537. Frank, —. [Some remarks on the sensitivity of the peritoneum and the organs of the abdominal cavity.] *Čas. Lék. čes.*, 1937, 76, 1096-1097.—Peritoneal sensitivity is made certain by the existence of nerve endings with distinct afferent innervation (Vater-Pacini bodies). Furthermore, painful crises, especially during the course of visceral colic, and research employing local anesthesia demonstrate the sensitivity of the abdominal organs.—(Courtesy *Année psychol.*).

5538. Frazier, C. H., Lewy, F. H., & Lowe, S. N. The origin and mechanism of paroxysmal neuralgic pain and the surgical treatment of central pain. *Brain*, 1937, 60, 44-51.—The case history of a woman 64 years of age with a left hemiplegia and her operative record lead the authors to conclude that there are two factors involved in neuralgic pain. These pains are essentially conditioned by the presence of a thalamic lesion in the afferent pain pathways. Very weak peripheral stimulations serve to set off the painful reaction. The operative techniques which were unsuccessfully employed to relieve the pain are extensively described.—W. S. Verplanck, Jr. (Brown).

5539. Frenkel, O. M. [Sensory functions of the vestibular apparatus.] *Probl. Fiziol. Patol. Org. Chuvstv.*, 1936, 121-146; 216-217.—After rotation (10 times in 20 sec.) of 18 subjects in the Bárány chair, there were noted, beyond the usual reactions to rotation, modifications in the tactile sense in 95% of the cases and changes in visual sensations in 88%. In 25 subjects who had demonstrable cerebral lesions and who displayed various sensory difficulties, there occurred either no modifications upon rotation or very slight ones. The author suggests that the examination of sensory processes of labyrinthine

origin should be introduced into clinical practice.—(Courtesy *Année psychol.*).

5540. Frisch, K. v. *Farbensinn der Bienen.* (Color vision in bees.) (Film.) Berlin: Reichstelle für den Unterrichtsfilm, 1926. 280 ft., 16 mm. (silent). Sale price on request.—Bees are trained to select a blue strip of paper on which food is placed. Control experiments with strips of gray paper show that the insects are responding to the hue and not to the brightness of the color.—L. F. Beck (Oregon).

5541. Gatscher, S. *Über den synergischen Mechanismus der Gehörorgane.* (The synergic mechanism of the auditory apparatus.) *Wien. klin. Wschr.*, 1939, 52, 463-464.—In some cases of unequal hearing difficulties in both ears it was found that the auditory sensitivity of both ears was greater than that of the better ear alone. The author believes that this can be explained on the basis of an acoustic decussation in the medulla oblongata and the nature of the resonance theory.—P. L. Krieger (Leipzig).

5542. Gaudlitz, A. *Der Einfluss einer verschieden starken Muskelanstrengung auf das Augenmass für eine durch sie herbeigeführte gleichzeitige Situation.* (The effect of varied muscular effort on the visual discrimination of a situation simultaneously produced.) *Arch. ges. Psychol.*, 1939, 103, 94-150.—A lever dynamometer registering on a kymograph was connected electrically with a tachistoscope which illuminated two horizontal lines of varying length separated by a constantly visible fixation point between their inner ends. After the experimenter had arranged the lengths of the lines the subject, on pulling the lever, which also illuminated them, estimated their relative extents during the moment of exposure. Increase of pulling effort from 4 to 8 kg. affected errors in judgment by about the ratio 2 : 3, with other results in proportion.—H. D. Spoerl (American International College).

5543. Glees, M. *Über Methoden zur Untersuchung des latenten Schielens.* (Methods of examination for latent squint.) *Dtsch. Militärarzt*, 1938, 3, 263-264.—Glees tried out the Maddox tangential scale and a Zeiss phorometer on 100 aviators. The results agreed in only 3 cases; in all the others the phorometer deviated toward esophoria. Comberg gives as an explanation for this that through the psychic impression of nearness a convergence impulse is conveyed to the eyes. The simple method of Maddox is much preferable.—P. L. Krieger (Leipzig).

5544. Haig, C., & Lewis, J. M. *A simple method of measuring brightness threshold of dark adapted eye at all ages.* *Proc. Soc. exp. Biol., N. Y.*, 1939, 41, 415-418.—The apparatus described makes possible the measurement of the final or equilibrium visual threshold without the necessity of fixation. A test light of adjustable brightness and small enough to be held in the experimenter's hand is moved slowly from side to side through 180° of arc 10 cm. from the subject. When the test field is made sufficiently bright an infant will turn its head toward the light. Observation of this movement in the dark

following adaptation is made possible by attaching a small tube of luminous paint to the subject's forehead.—H. Peak (Randolph-Macon).

5545. Hallpike, C. S., & Hartridge, H. *On the response of the human ear to audio-frequency electrical stimulation.* *Proc. roy. Soc.*, 1937, B123, 177-193.—Using a photo-electric siren and a loud-speaker for stimulation by air transmission and electrodes (of which the active electrode was a copper wire cemented in celluloid and placed in the saline-filled external auditory canal) for electrical stimulation of the cochlea, a comparison of the auditory sensations elicited by the two methods was made. A frequency range of 512-1024 c.p.s. was covered. The frequency perceived was exactly the same in the two cases, and beats were obtained with either when a tuning fork of a slightly different frequency was placed on the skull. Comparisons of intensity at 512 c.p.s. gave exact correspondence for one of the observers, and for the other a more rapid increase in loudness for acoustic stimulation than for electrical. The effects of interruption (4 or 10 cycles) and for reversal of phase were the same in both cases, which leads to the conclusion that electrical stimulation produces the same cochlear processes as do the objective movements produced by normal stimulation.—W. S. Verplanck, Jr. (Brown).

5546. Hallpike, C. S., Hartridge, H., & Rawdon-Smith, A. *On the electrical response of the cochlea and auditory tract of the cat to a phase reversal produced in a continuous musical tone.* *Proc. roy. Soc.*, 1937, B122, 175-185.—A change of phase in a continuous tone of a given frequency produces a sharp sensation of beat. The present investigation is concerned with the effect of such a phase reversal on the electrical response of the cochlea and of the auditory tract. Sinusoidal waves were produced by a photo-electric siren used in conjunction with a loud-speaker, and the requisite changes in phase by the doubling of the width of a tooth or of the distance between two teeth of the siren disk. Markedly different phenomena were observed in the cochlear response and the response of the auditory tract, phenomena which are predictable by the resonance theory of the receptor mechanism of the basilar membrane. The cochlear response acted as if the cochlea were a microphone, but the response of the tract was characterized by a period of silence upon change of phase such that several oscillations were completely absent. It is concluded that the cochlear response plays no part in the excitation of the auditory nerve, and is attributable to the movement of a polarized membrane, presumably the membrane of Reissner.—W. S. Verplanck, Jr. (Brown).

5547. Hardy, J. M., & Oppel, T. W. *Studies in temperature sensation: III. The sensitivity of the body to heat and the spatial summation of end-organ responses.* *J. clin. Invest.*, 1937, 16, 533-540.—Quantitative measures were made of summation on different areas of the body and for surfaces of different extent, using as stimulus radiant heat of known

wave length. Long infra-red waves were employed, and the forehead was studied most extensively. The amount of summation observed varied markedly with the region of the body examined. There was no summation upon simultaneous stimulation of hand and forehead, but it reached the value of 47% for simultaneous stimulation of the two hands. For the surface of the forehead, which possesses homogeneous sensitivity and probably a uniform distribution of end-organs, the capacity for summation can be expressed as a straight line on a log log grid, whose formula is $\log I + 0.78 \log A = -2.09$, where I is the intensity of the stimulus and A the area stimulated. This formula is analogous to that of Granit and Harper for spatial summation in the retina.—*W. S. Verplanck, Jr. (Brown)*.

5548. Harrower, M. R. Changes in figure-ground perception in patients with cortical lesions. *Brit. J. Psychol.*, 1939, 30, 47-51.—In the perception of the ambiguous profile-vase figure, it was found that 43% of 30 patients with cerebral lesions were unable to make anything out of the figure, although it presents no difficulties to normals. One third of the patients showed the influence of an established attitude (holding to the impression first created in the face of counteracting perceptual influence), and an inability to pick out the two aspects of the figure simultaneously. Other not necessarily relevant objects were also introduced. It appears that spontaneous sensory organization differs from the normal in such patients. They are also less capable of taking a detached attitude toward their perceptions, and where possible incorporate them in a framework of tangible and concrete reality. There seems to be a greater degree than normal of "ego involvement"; failure becomes a dangerous situation to be avoided, while the perpetuating of a successful response becomes a safeguard against possible difficulties.—*M. D. Vernon (Cambridge, England)*.

5549. Hartmann, G. Application of individual taste difference towards phenyl-thio-carbamide in genetic investigations. *Ann. Eugen., Camb.*, 1939, 9, 123-135.—The purpose of this study was to compare the efficiency of different methods. Aqueous solutions were used, ranging in concentrations from 1/400 to 1/400,000 P.T.C., and threshold values were determined for 500 subjects. Evidence is presented that the threshold-value method is superior. It was shown that the crystal and paper methods fail as means for distinguishing between the two genetic groups, since positive reaction on one of these tests does not prove conclusively that the subject belongs to the taster group, although this is more probable than the opposite. In instances where the crystal and paper method have indicated a deviation from the rules of heredity, employment of the threshold-value method has shown that these were merely apparent. The subjectivity of the method makes it serviceable only when the subject himself wishes to obtain reliable results.—*J. W. Dunlap (Rochester)*.

5550. Hauff, E. v. Der Einfluss der optischen Feldgliederung auf die Einbettung akustischer

Gegebenheiten bei den sog. Komplikationsversuchen. (The effect of an organized visual field on the embedding of auditory items in complication experiments.) *Arch. ges. Psychol.*, 1939, 103, 71-93.—The subjects reported the temporal position of auditory signals in terms of the location of a dial pointer. The pointer was a shadow projected on a wall, the dial being marked into 60 unnumbered divisions, and the pointer revolving at a constant speed. The experimental introduction of special marks on the dial near critical points altered the determination of the temporal position. The direction of alteration depended on the possibility of meaningful organization of the visual field through the various markings.—*H. D. Spoerl (American International College)*.

5551. Hecht, S., & Mandebaum, I. Vitamin A and dark adaptation. *J. Amer. med. Ass.*, 1939, 112, 1910-1916.—4 young men deprived of dietary vitamin A responded by a steady rise of both rod and cone thresholds which was apparent almost from the first day after the removal of vitamin A from the diet. After 2 weeks of deprivation they showed thresholds above any value normally found in the population; their thresholds continued to rise so long as the dietary deprivation was maintained. The return to a normal diet resulted in an initial small rapid drop in threshold followed by a more gradual decrease; nearly 2 months was required for the subjects to return to normal.—*W. J. Brogden (Wisconsin)*.

5552. Hughes, J. W. Binaural localization with two notes differing in phase by 180°. *Brit. J. Psychol.*, 1939, 30, 52-56.—The least perceptible variations in the relative phases and intensities of two notes differing in phase by 180° and 0° have been compared, and little difference found between them. The sensations experienced in the first case are described.—*M. D. Vernon (Cambridge, England)*.

5553. Hughson, W., & Thompson, E. Research in audition: the next steps; experimental findings and their clinical aspects. *Arch. Otolaryngol., Chicago*, 1939, 29, 903-918.—*W. J. Brogden (Wisconsin)*.

5554. Hunter, W. S. The span of visual discrimination as a function of duration and intensity of stimulation. *Science*, 1939, 89, 403.—Abstract.

5555. Kalmus, H. Photohorotaxis, eine neue Reaktionsart, gefunden an den Eilarven von *Dixippus*. (Photohorotaxis, a new type of reaction discovered in the immature larvae of *Dixippus*.) *Z. vergl. Physiol.*, 1937, 24, 644-655.—Newly hatched larvae of the walking stick *Dixippus morosus*, when placed in the center of a circular area 40 cm. in diameter, run toward dark strips placed vertically at intervals on its periphery, and mount these strips. This reaction, an orientation with respect to a light-dark border, is termed "photohorotaxis." With much wider dark strips (90° arc) the animals ran upward in a course parallel to the light-dark border. The reaction depends upon the visual orienting effect of one border or of closely adjacent light-dark

borders, as was shown by the fact that narrow light bands arranged vertically at intervals against a dark wall were mounted much as were narrow black strips. Geotaxis has some minor importance, since wall areas containing vertically arranged strips were mounted somewhat more frequently than were walls with horizontally arranged light-dark strips. The results are discussed in relation to the histology and dioptrics of the *Dixippus* eye. Kalmus views this reaction as intermediate with respect to phototaxis and form vision, or simply as a primitive kind of form vision.—*T. C. Schneirla* (New York University).

5556. **Karpe, G.** Über die Axialverschiebung der Linsenpole bei Akkommodation. (Axial displacement of the poles of the lens in accommodation.) *Acta ophthalm., Kbh.*, 1939, 17, 172-191.—With accommodation of 10 diopters, curvature of the posterior surface of the lens is constant for all subjects; axial displacement differs with individuals. True posterior displacement of the lens surface is about 0.15 mm. The method employed was not suitable for measuring the curvature of the anterior surface.—*P. L. Krieger* (Leipzig).

5557. **Kestenbaum, A.** Blickbewegungen und Blicklähmungen. (Glance movements and paralysis of gaze.) *Confin. neurol.*, 1939, 2, 121-147.—"Four types of paralysis of gaze are distinguished: (a) loss of all movements, (b) retention of vestibular counter-movements only (type Roth-Bielschowsky), (c) retention of vestibular and pursuit movements only (type Oppenheim), (d) retention of all movements except directional movement. The anatomic basis of these types will be considered after further studies."—*P. L. Krieger* (Leipzig).

5558. **Koepe, H.** Der Geschmack von Erwachsenen und von Kindern. (Taste in adults and children.) *Arch. Kinderheilk.*, 1939, 116, 68-71.—*P. L. Krieger* (Leipzig).

5559. **König, F.** Über die bei subjektiven Präzisionsmessungen an Natriumlicht nach dem Filterverfahren notwendigen Messbedingungen. (The necessary conditions for measurement in subjective precision measurements in sodium light, according to filter methods.) *Helv. phys. Acta*, 1939, 12, 229-248.—*P. L. Krieger* (Leipzig).

5560. **Koschmieder, H.** Luftlicht und Sichtweite. (Diffused light and amplitude of vision.) *Naturwissenschaften*, 1938, 26, 521-528.—The "representative amplitude" of vision depends solely on the coefficients of decrease of illumination, and is independent of the direction of the gaze.—*P. L. Krieger* (Leipzig).

5561. **Langenbeck, B.** Symmetriesymptom, Symmetrieregeln und Symmetriegesetz. (Bilateral symptoms and the rule and law of symmetry.) *Z. Hals-Nas.- u. Ohrenheilk.*, 1938, 43, 370-386.—In conformity with his "rule of symmetry," Langenbeck distinguishes as regular cases those with bilateral remnants of hearing or with complete bilateral deafness, both without disturbance of vestibular function. "Regular findings" are three times more common than other findings, and are an essential symptom of hereditary deafness. Deaf-mutes who

have inherited deafness as a dominant characteristic from only one parent are very probably symmetrical cases, as are also deaf children who have inherited their defect as a recessive trait through the marriage of apparently normal relatives. The conditions for inheritance of asymmetry are seldom fulfilled.—*P. L. Krieger* (Leipzig).

5562. **Luckiesh, M. L., & Holladay, L. L.** Measuring visibility under preventable glare. *J. opt. Soc. Amer.*, 1939, 29, 215-217.—A method for quickly and easily measuring the effects of glare upon visibility of objects is described.—*R. J. Beitel, Jr.* (American Optical Company).

5563. **Lurie, M. H.** What is perception deafness from a physiological and histological basis? *Ann. Otol. etc., St. Louis*, 1939, 48, 1-16.—*W. J. Brogden* (Wisconsin).

5564. **Makarov, P. O.** Analyse électrophysiologique de la douleur. Hypothèse neurotonique. (Electrophysiological analysis of pain. A neurotonic hypothesis.) *Probl. Fiziol. Patol. Org. Chuvstv*, 1936, 111-120; 215-216.—Paralleling the tonic and phasic reactions of the muscles, pain represents a tonic reaction of the centers which may be elicited by various types of receptors. Slow establishment, duration, and indefatigability are characteristic of both pain and tonic motor reactions.—(Courtesy *Année psychol.*).

5565. **McFarland, R. A., Knehr, C. A., & Berens, C.** Metabolism and pulse rate as related to reading under high and low levels of illumination. *J. exp. Psychol.*, 1939, 25, 65-75.—Basal metabolism and pulse rate of subjects were compared while reading for 1 hour under 1 foot-candle of illumination compared with reading for 1 hour under 50 foot-candles. The experiment was repeated on a succeeding morning with order of illumination reversed. No apparent relationship was observed between basal metabolic rate and level of illumination. There was a general tendency for heart rate to decrease slightly during the 2-hour reading period, irrespective of level of illumination. It is questionable whether reliable criteria for determining adequate levels of illumination for tasks such as reading during short periods of time can be obtained in terms of oxygen consumption and heart rate, since the amount of tissue involved in the eyes and brain is relatively small in relation to the total amount of tissue in the body. The changes, if any, might be expected to be relatively small and consequently concealed by uncontrollable variables.—*H. W. Karn* (Pittsburgh).

5566. **Meyer, E.** Akustik. (Acoustics.) *Phys. in regelmäss. Ber.*, 1938, 6, 127-162.—A survey of the literature.—*P. L. Krieger* (Leipzig).

5567. **Meyer, M. F.** Space perception by radio. *Science*, 1939, 89, 389.—The author describes a method by which listeners with two good ears may "overcome the fusion to which simultaneous tones are subject in the untrained listener," thereby being greatly aided in the esthetic appreciation of music. Two radios, one adjusted to amplify high pitches and

the other to amplify low pitches, are placed in opposite corners of a large room, with the listener between the two.—*F. A. Mote, Jr.* (Brown).

5568. Morgan, M. W., Jr., & Olmsted, J. M. D. Quantitative measurements of relative accommodation and relative convergence. *Proc. Soc. exp. Biol.*, N. Y., 1939, 41, 303-307.—Positive relative accommodation (PRA) is the amount that accommodation can be stimulated toward a point nearer the eyes than that fixated. Negative relative accommodation (NRA) is the amount accommodation can be stimulated toward a point more distant. PRA is measured by placing before the eyes concave spherical lenses of increasing power until the detail of the target becomes blurred. The same concepts are applied to relative convergence, using prisms instead of spheres. 43 subjects 20-35 years of age were used. "The limits to which accommodation can be changed by interposition of spherical lenses without change in convergence at a fixation distance of 40 cm are 4.75 D. and 0.75 D. From 4.25 D. to 1.50 D. the actual accommodation is 80% of the lens value used for stimulation. Convergence cannot be changed without slightly changing accommodation. Between the limits of -11 P.D. and +18 P.D. this change amounts to 0.01 D. change in accommodation with each 1.0 P.D. change in convergence."—*H. Peak* (Randolph-Macon).

5569. Neumueller, J. New developments in aniseikonia. *Amer. J. Optom.*, 1939, 16, 161-177.—A résumé of the more familiar aspects of aniseikonia is followed by a presentation of data recently collected by the Dartmouth group in their attempts to meet some criticisms of their postulates. Determination of the horopter with asymmetric convergence shows that, since the horopter is only slightly turned from the true frontal position, there is some compensation for the size disparity of the retinal images. By the nonius method, however, where each eye sees part of the test rods but no part is seen binocularly, results were more in accord with geometric conditions, indicating that adequate compensation occurs only in association with full fusion action. Over-all size compensation for the horizontal would create an intolerable disparity in vertical dimensions, but empirical results show a slight over-compensation for the vertical with considerable under-correction for the horizontal. Studies of after-images following fixation with asymmetric convergence show that uni-ocular after-images demonstrate calculated size differences and maintain these differences during ocular excursions; images of the same size continue equal for all positions of the eyes. This indicates that the compensation occurs at a low level, being conditioned by physical factors such as, possibly, unequal accommodation. A second criticism has been that peripheral fusion may be inadequate to maintain the relative positions of the two eyes, but it is readily demonstrated that peripheral fusion can control the positions of the eyes even at the expense of doubling of a binocularly seen foveal test object.—*M. R. Stoll* (Ohio State).

5570. Oak, L. An appraisal of the Betts visual sensation and perception tests as a sorting device for use in schools. *J. educ. Psychol.*, 1939, 30, 241-250.—Children up to 15 years of age were used as subjects. 100 were handicapped in reading and were suspected of visual difficulty, the other 100 were selected at random. All subjects were tested twice with the Betts cards (DB series), scores being obtained by following the manual. S's were then examined by an ophthalmologist. The findings indicated both quantitative and qualitative disparities. The visual testing material as it is dispensed and used by schools does not serve to screen out the children who should be referred to an eye specialist.—*R. M. Bellows* (Maryland).

5571. Oppel, T. W., & Hardy, J. M. Studies in temperature sensation: I. A comparison of the sensations produced by infra-red and visible radiation. *J. clin. Invest.*, 1937, 16, 517-524.—A study of thermal sensitivity employing radiant heat as stimulus. The radiations to which the human body is exposed may be divided into four groups: ultra-violet (below 0.36 μ), visible (0.36-0.8 μ), penetrating infra-red (0.8-3 μ), and non-penetrating infra-red (3 μ and longer). The human skin absorbs all those shorter than 3 μ . Determinations of the absolute threshold were made on 21 white subjects to determine the least quantity of radiation capable of eliciting a sensation. The radiant energy was applied for 3 sec. to an area of 14.5 cm.² on the surface of the forehead, where the reflectivity of the skin had previously been measured. Thresholds obtained indicate that the non-penetrating infra-red rays are by far most efficacious in eliciting the report of heat. Least effective were rays in the visible spectrum. As might be expected, there was a marked difference in the thresholds of negro subjects, particularly for visible radiation. Penetrating radiations, then, are the least effective, and the authors conclude that the sensation of heat results from the activation of the thermal receptors of the skin, taking issue with a previous suggestion of Bazett and McGlone.—*W. S. Verplanck, Jr.* (Brown).

5572. Oppel, T. W., & Hardy, J. M. Studies in temperature sensation: II. The temperature changes responsible for the stimulation of the heat end-organs. *J. clin. Invest.*, 1937, 16, 525-531.—Of the three groups of radiations employed by the authors, visible, penetrating infra-red, and non-penetrating infra-red, the last produced the greatest elevation of skin temperature when equal energies were applied, the first the least. The same difference persisted, although lessened, when corrections were made for reflection by the skin. When the energy of each was fixed at the threshold value, it was observed that the visible radiations had produced the greatest elevation of temperature both at the surface and subcutaneously. Non-penetrating infra-red produced the least modifications of temperature. The most effective radiations, the non-penetrating, were those which produced relatively the smallest increases at a depth and the greatest on the surface. It is

concluded that the adequate stimulus for thermal sensation is not the absolute temperature or the rate of change of temperature, but a modification of the normal thermal gradient in the skin. Temperature measurements were taken some minutes after withdrawal of the stimulus, and extrapolation was used to calculate the temperatures effective at the time of stimulation.—*W. S. Verplanck, Jr.* (Brown).

5573. **Pauli, R.** Eine neue geometrisch-optische Täuschung (Sektorentäuschung). (The sector illusion; a new geometrical optical illusion.) *Arch. ges. Psychol.*, 1939, 103, 151-159.—The sector illusion is produced by drawing a circle with part of the circumference missing and then drawing the missing part of the same circle in its proper sector but with the center moved outward. The illusory properties concern the extent of the sector, its curvature, and its relation to verticals through the end-points. The illusion is explained by central tendencies of the total person, in some accord with Lipps' theory of discontinued implied movement.—*H. D. Spoerl* (American International College).

5574. **Piéron, H.** Les modalités des messages sensorielles. (The modality of sensory messages.) *Scientia, Milano*, 1939, 65, 312-323.—The magnitude of the electrical potential causing the "nervous influx" was thought of as physiologically representing a measure of the intensity of sensation. The variations in magnitude, then, could not but depend on the number of nervous fibers participating in the transmission of the sensory message, and one was led to conclude that the intensity of sensation stood in relation to the number of nervous receptors. However, the phenomenon of the "local sign" in the visual and cutaneous organs of perception seemed to indicate that variations in luminous and tactile intensity were transmitted by a single receptor with its adjacent chain of neuron transmitters. This mechanism, while applicable to visual perception, was found in error in the case of cutaneous or auditory perception, because then the intermittent stimulation can be shown to cause synchronous responses in the afferent nerves. The author points to the possibility of direct transmission taking place in the avenues providing access to the cortex, and of diffuse polysynaptic transmissions which might serve to explain the above dualism.—*E. Franzen* (S. Illinois State Normal University).

5575. **Ricci, A.** La percezione tattile della forma negli anormali. (Tactile perception of form in abnormal subjects.) *Cervello*, 1938, No. 2, 61-71.—Tactile-kinesthetic and visual complexes are mutually interactive. The author also finds an intellectual element in perception.—*R. Ricci* (Rome).

5576. **Rubin, E.** Quelques expériences sur les rapports entre les domaines auditif et tactile vibratoire. (Some experiments bearing on the relation between the auditory and the tactile vibratory domains.) *J. Psychol. norm. path.*, 1939, 35, 19-26.—The author is interested in the inhibitory relationship between tactile sensations of vibration and auditory ones. He reports several experiments with

7 subjects, using different intensities, different time intervals, etc.—*R. E. Perl* (New York City).

5577. **Schouten, J. F., & Ornstein, L. S.** Measurements on direct and indirect adaptation by means of a binocular method. *J. opt. Soc. Amer.*, 1939, 29, 168-182.—Changes in the sensitivity of the fovea of one eye under the influence of a glaring source of light shining into that eye can be demonstrated by comparing the visual impression obtained by that eye from a dimly illuminated surface with the impression obtained by the other eye from a similar surface. By adjusting the illumination of one of the surfaces the apparent brightnesses can be made to match exactly. In this way a quantitative method of measuring the sensitivity of the fovea under the influence of various conditions is obtained. When a small area of the retina is illuminated the sensitivity of this area and also of the surroundings drops to a considerably lower level within 0.1 second (α -adaptation). The rate of recovery of the sensitivity after exposure is strongly dependent upon the time of exposure (β -adaptation). α -adaptation can be accounted for neither by assuming a strong adaptive influence of the stray light within the eye nor by assuming a lateral diffusion of photosensitive substances or of photolytic products over the retina. The hypothesis is put forward that α -adaptation is of electrical origin. This hypothesis accounts for many of the phenomena observed with incandescent lamp light, but not for those observed with strongly chromatic light. The only hypothesis presenting itself at present to account for these phenomena seems to be that α -adaptation has its seat in the retinal synapses.—*R. J. Beitel, Jr.* (American Optical Company).

5578. **Schüller, H.** Die Entwicklung des Geruchsorgans bei der Sturmmöve und der Seeschwalbe. (The development of the olfactory organ in gulls and terns.) *Z. Anat.*, 1938, 109, 75-98.—The development of the three shells in the olfactory organs of *Larus* and *Sterna* is quite similar to that in other birds. The central shell develops first and is followed by the superior one, while the entrance portal develops last.—*P. L. Krieger* (Leipzig).

5579. **Sewall, K. W.** Blood, taste, digital hair, and color of eyes in the eastern Eskimo. *Amer. J. phys. Anthropol.*, 1939, 25, 93-100.—Of the pure-breed Eskimos tested, 56.9% of the males and 30.4% of the females were unable to taste para-ethoxy-phenolthio-urea. Of the mixed-breed Eskimos tested, 38.1% of the males and 25% of the females were non-tasters.—*W. J. Brogden* (Wisconsin).

5580. **Smith, M. I.** Significance of false projection in treatment of squint. *Arch. Ophthalmol., Chicago*, 1939, 21, 990-998.—In this study of 177 cases of uncomplicated non-paralytic convergent strabismus without marked vertical deviation, tables are presented comparing age of incidence of squint, angle of squint, and results of surgical, orthoptic, and refractive corrections for those with normal and with false projection. The following figures are particularly significant: of those with normal projection

whose eyes were straightened surgically 88% remained straight; of those with false projection, 13.3% remained straight when surgery had not been preceded by orthoptic training, but 89.4% remained straight when normal projection had been restored before surgical intervention. Development of normal projection had been accomplished by occlusion of the non-deviating eye and the usual binocular training. One case is cited of a woman, aged 36, who had had an alternating squint since the age of 3, but who developed good fusion and some degree of depth perception within 6 months after surgical and orthoptic treatment were begun.—*M. R. Stoll* (Ohio State).

5581. **Stefanini, A.** *Sensazioni sonore provocate da stimoli elettrici.* (Sound sensations aroused by electrical stimuli.) *Arch. ital. Otol.*, 1938, 50, 200-202.—Stevens has found that by using an oscillograph, sinusoidal currents are obtained which, when conducted to the ear, produce sound sensations. The author explains this phenomenon by assuming the presence of electric resonators in the organ of Corti.—*R. Ricci* (Rome).

5582. **Stippel, F., & Vollers, H.** *Über die Wahrnehmung kleinflächiger Farbreize und ihre typologische Bedeutung nebst Beiträgen zur Ostwaldschen Farbenlehre.* (The perception of color stimuli of small area and their typological significance, with contributions to Ostwald's color theory.) *Arch. ges. Psychol.*, 1939, 103, 160-202.—The relation of color values to the extent of stimulus area, using stimuli of the order of a few mm., was investigated by varying the size of the stimulus instead of changing its distance from the eye. The results are similar to those previously determined by Aubert, v. Wittich, Donders, Siebeck, and Schmeckebeier, whose work is summarized in tabular form. Subjective distribution of brightnesses was also studied in terms of Ostwald's color circle, with somewhat different determinations resulting.—*H. D. Spoerl* (American International College).

5583. **Thomson, A. M., Griffith, H. D., Mutch, J. R., & Lubbock, D. M.** *A study of diet in relation to health. Dark adaptation as an index of adequate vitamin A intake. II. A new photometer for measuring rate of dark adaptation.* *Brit. J. Ophthalmol.*, 1939, 23, 461-478.—An apparatus is described wherein the test object is a black letter only and binocular viewing is utilized. Special attention is directed to the importance of elimination of antecedent light. Data are presented to demonstrate the reliability of the method and contents.—*R. J. Beitel, Jr.* (American Optical Company).

5584. **Tinbergen, N., & Kruyt, W.** *Über die Orientierung des Bienenwolfes (*Philanthus triangulum* Fabr.) III. (Concerning the orientation of the bee-wolf.)* *Z. vergl. Physiol.*, 1938, 25, 292-334.—Continuing experiments upon *Philanthus*, two previous methods were employed, both involving the presentation of figures arranged around the actual nest entrance and around nearby artificial entrances. Tests showed 3-dimensional objects to be more

effective than flat objects. Height was the most effective cue; hemispherical blocks were dominant over flat circular disks, even when the flat objects were greater in surface or were sectorized. Rectangular blocks of smaller diameter were preferred by most wasps in most trials to lower cubical blocks of greater width. Surface area, greater sectoring, and the shadow effect proved to be factors secondary to height in importance. Sand markings near the wasp's own nest opening were more important as cues than were those of neighboring nests, although relatively remote cues also were used. Also of greater importance are objects which subtend the same visual angle with respect to the central position, as against nearer objects of different angle. Objects which contrast strongly with the background, and objects present throughout training, are also superior. Added trials contribute an increased organization in the use of different route-indicators. When learned cues are ineffective new ones may be employed.—*T. C. Schneirla* (New York University).

5585. **Trendelenburg, F.** *Neue Fragen der Klangforschung.* (New problems of studies on clang.) *Elektrotech. Z.*, 1938, 59, 475-480.—*P. L. Krieger* (Leipzig).

5586. **Unger, M.** *Objective measurement of hearing.* *Arch. Otolaryngol., Chicago*, 1939, 29, 621-623.—A technique is described whereby the audiogram of a subject can be obtained by using the audiopupillary reflex as an indicator of hearing.—*W. J. Brogden* (Wisconsin).

5587. **Viaud, G.** *Quelques considérations physiologiques et psychologiques concernant le phototropisme animal.* (Some physiological and psychological considerations concerning animal phototropism.) *J. Psychol. norm. path.*, 1938, 35, 269-287.—The author discusses the nature of phototropism and its relation to other types of tropisms, the finality or adaptability of phototropism, and dermatropic sensations. He feels that Loeb's definition of phototropism must be completely revised, and agrees with Jennings that the axial orientation is incidental and not the essence of phototropic reactions. Among these responses one must distinguish between positive phototropic reactions where the animal turns and moves toward the light, and photopathic or negative reactions where the animal flees from the light because it cannot endure the excitation.—*R. E. Perl* (New York City).

5588. **Waetzmänn, E., & Kurtz, R.** *Untertöne.* (Accessory sounds.) *Ann. Phys., Lpz.*, 1938, 31, 661-680.—*P. L. Krieger* (Leipzig).

5589. **Wald, G.** *The porphyropsin visual system.* *J. gen. Physiol.*, 1939, 22, 775-794.—A purple pigment, porphyropsin, is present in the rods of freshwater and some anadromous fishes instead of rhodopsin. This pigment participates in a retinal cycle in a manner similar to rhodopsin. Some properties of porphyropsin are described.—*M. A. Rubin* (Worcester State Hospital).

5590. **Weitz, J.** *Vibratory sensitivity as affected by local anesthesia.* *J. exp. Psychol.*, 1939, 25, 48-

64.—Stimulus thresholds for vibration were made on a number of spots on the dorsal side of the arm just above the wrist. The region was then cocaineized by electroendosmosis and the same spots retested for vibratory thresholds. A marked rise was found in thresholds at the second testing. Recovery of sensitivity was followed after procainization, and prick was found to return first. However, there was no change in vibratory sensitivity. With the return of contact a drop was noted in the vibratory thresholds and they returned to normal with recovery of pressure sensitivity. Disturbances caused by vibratory stimulation traveled relatively great distances. These distances could be increased by stretching the skin with adhesive tape. All the results of the experiments appear to support the view that vibratory sensations are mediated by the same mechanism mediating pressure sensations.—*H. W. Karn* (Pittsburgh).

5591. Weston, K. Notes on the comparative anatomy of the sensory areas of the vertebrate inner ear. *J. comp. Neurol.*, 1939, 70, 355-394.—This is a histological study in which the author gives approximate measurements of each of the sensory areas of the inner ear (both auditory and vestibular) in 24 vertebrates ranging from one of the lowest known forms of amphibians to man.—*C. P. Stone* (Stanford).

5592. Yakovlev, P. A. The influence of acoustic stimuli upon the limits of visual fields for different colors. *J. opt. Soc. Amer.*, 1938, 28, 286-289.—"Acoustic excitations may influence the limits of visual fields for color stimuli. The limits of the visual fields for the green and blue colors expand under the influence of acoustic stimuli; for the orange-red color they contract; for the extreme red color they do not change at all. The color sensibility of the peripheral part of retina changes under the influence of acoustic stimuli very much like the change of the color sensibility of the macular regions of the retina."—*R. J. Beitel, Jr.* (American Optical Company).

[See also abstracts 5456, 5459, 5499, 5772, 5852, 5858, 5897, 5898, 5901, 5913.]

LEARNING, CONDITIONING, INTELLIGENCE

(incl. Attention, Thought)

5593. Bousfield, W. A. A simple demonstration of the conditioned response. *Science*, 1939, 90, 70.—A procedure is described for demonstrating conditioning to groups of students. The method uses equipment ordinarily available and secures unequivocal results within a short space of time.—*F. A. Mote, Jr.* (Brown).

5594. Brückner, W. Die Erbbedingtheit des Gedächtnisses. (The hereditary factor in memory.) *Anthrop. Anz.*, 1938, 15, 43-49.—In this experiment 224 pairs of twins were required to throw wooden figures into a box through appropriate openings and afterwards to draw these figures from memory

according to form and position. There was greater similarity in the performances of identical than in those of fraternal twins, which must be explained by the similarity in the heredity of the former.—*P. L. Krieger* (Leipzig).

5595. Buxton, C. E., & Henry, C. E. Retroaction and gains in motor learning: 1. Similarity of interpolated task as a factor in gains. *J. exp. Psychol.*, 1939, 25, 1-16.—The data from this study indicate that pursuit rotor learning does not, like verbal learning, show a drop in performance level after interpolated practice on varying types of motor tasks. Rather, no matter what the interpolated activity, in the present experiment, a definite gain occurs. Women show a relative retroaction, in that certain types of interpolated activity prevent the appearance of as large a gain as that shown by a control group which read during the interpolated period. The pursuit meter had the strongest effect of this type, and the maze next. Spool packing, however, produced a greater gain than that shown by the control group. Only the meter produced relative retroaction for the men. The spool packing performance and the maze seemed to produce a greater amount of gain for the men than simply reading in the interpolated period.—*H. W. Karn* (Pittsburgh).

5596. Bykowski, L. J. Recherches expérimentales sur la mentalité des lycéens polonais. (Experimental studies on the mentality of pupils in Polish secondary schools.) *Kwart. psychol.*, 1939, 11, 95-104.—An abridged synthesis is presented of the main results of psychological studies carried on over a period of 25 years among boys in the secondary schools of Poland. The study covers 253 schools, 625 classes, and 12,887 pupils. A modification of the Rossolimo test was employed for measuring intelligence. Comparisons are made between test results and scholastic records among different racial, cultural, and regional groups. Changes in attitudes toward religion and nationalism since the War are shown.—*T. M. Abel* (New York City).

5597. Cook, T. W. Guidance and transfer in part and whole learning of the disc transfer problem. *J. educ. Psychol.*, 1939, 30, 303-308.—The 4-block disc transfer problem was learned by 3 groups of pupils. Group I used the whole method, group II the part method, and group III learned by the part method with instruction. The part method gave total scores about equal to those for the whole method, and it was found that verbal instruction greatly facilitated learning. Transfer by generalization which resulted from verbal guidance may be of considerable importance in solution of the disc transfer problem.—*R. M. Bellows* (Maryland).

5598. Dybowski, M. Conditions for the appearance of hypnagogic visions. *Kwart. psychol.*, 1939, 11, 68-94.—This analysis of the conditions under which hypnagogic images develop is an introduction to a larger research study being carried on. It was found that training and self-instruction (will power) increased markedly the appearance of these images.

Subjects with creative ability had the most pronounced hynagogic images. Three colored plates of reproductions of images are included.—*T. M. Abel* (New York City).

5599. Edwards, A. L., & English, H. B. Reminiscence in relation to differential difficulty. *J. exp. Psychol.*, 1939, 25, 100-108.—A test of retention of 60 items given to school children immediately after the learning period and again after 30 days showed the slow decline in means expected with meaningful material. Breakdown of the whole test into the two parts of which it was known to be composed showed that all the loss in mean score was localized in one half of the test—the half characterized by a larger influence of rote memory. On the grounds that retention is a matter of individualized responses, not of averages, analysis was made in terms of particular responses categorized in patterns according as they were correct or incorrect. Study of the patterns revealed an equal amount of forgetting in the operationally defined half-tests, thus contradicting the conclusion based on differences in averages. The mean differences in the half-tests were shown to be due then, not as might seem to differences in the amount of forgetting, but to the greater amount of reminiscence which was found in one of them.—*H. W. Karn* (Pittsburgh).

5600. Grüttner, R. Über Gewöhnung und Ungewöhnung bei fortlaufenden Willenshandlungen. (Habituation and change of habituation in acts of will in progress.) *Untersuch. Psychol. Phil.*, 1938, 14, No. 3. Pp. 41.—The mental set during the execution of an activity represents a psychical state which disappears quickly after completion of the task. The habit of execution, however, remains as a disposition arising through continued practice, which determines a protracted mode of response. A set for an activity, normally present, inhibits the execution of any other task. A habit of execution, however, inhibits and causes reversion to the "habitual" activity only if the second activity is definitely related to the first.—*P. L. Krieger* (Leipzig).

5601. Happich, C. Bildbewusstsein und schöpferische Situation. (Image consciousness and creative situation.) *Dtsch. med. Wschr.*, 1939, 65, Teil 1, 68-71.—The manner in which Kékulé arrived at the conception of the benzene ring is typical of intuitive production. With the recession of thought and calculation the state of meditation commences. This may pass over into sleep. Affectively toned sense impressions persist longest, continue to operate, and produce the "image" or solution.—*P. L. Krieger* (Leipzig).

5602. Hinton, R. T., Jr. A further study of the rôle of the basal metabolic rate in the intelligence of children. *J. educ. Psychol.*, 1939, 30, 309-314.—For a total group of 200 children, BMR correlated .70 with Binet IQ's and .74 with Arthur point-performance IQ's. "The author is well aware of the dangers in correlating any two such variables. Nevertheless, the results are of such a consistent

nature that we feel that the basal metabolic rate is a factor that should be taken into account in the clinical picture of any child."—*R. M. Bellows* (Maryland).

5603. Jackson, T. A. Studies in the transposition of learning by children: III. Transpositional response as a function of transposed dimensions. *J. exp. Psychol.*, 1939, 25, 116-124.—"Eight children, ranging in age from 46 to 57 months, were given 200 trials of practice, beyond fixation, on four-dimensional stimuli (size, shape, brightness, and pattern). Four of the eight subjects made stable absolute choice in transposition trials following practice. Three others made stable relative choice and one made unstable choice. These same children were then given a series of nine sets of critical trials in which there was a reduction of the number of transposed dimensions. In the first four of these sets, only one dimension was transposed; in the last five, two dimensions were transposed. The sets of critical trials were interspersed with practice on the original stimuli in order to maintain the 200-trial practice level. The results show a marked degree of 'regression' of response in the transposition trials. Those subjects previously responding absolutely on the four-dimensional stimuli now responded relatively, and those previously responding relatively now responded unstably. Choice time was markedly greater in the critical trials, particularly the first, than it was in practice trials."—*H. W. Karn* (Pittsburgh).

5604. Jankowska, H. Eidetische Bilder und Halluzinationen. (Eidetic images and hallucinations.) *Kwart. psychol.*, 1939, 11, 189-230.—Jaensch's theory that eidetic imagery is an evolutionary phase of mental development is accepted. The author thinks, however, that only imagination develops from eidetic imagery, not perception as did Jaensch. Hallucinations among psychotics are discussed as regression phenomena of imagination, being like more primitive eidetic images.—*T. M. Abel* (New York City).

5605. Juda, A. Über den Erbwert der leichtesten Schwachsinngrade und der blossen Schwachbegabung. (The hereditary factor in the slightest grade of feeble-mindedness and in simple retardation.) *Allg. Z. Psychiat.*, 1939, 112, 255-261.—In cases of retardation the apparent status of the single individual cannot be definitive in estimating the hereditary factor; this depends rather upon the picture of the family as a whole. Intellectual retardation may easily be confused with feeble-mindedness. It is, to be sure, infrequent.—*P. L. Krieger* (Leipzig).

5606. Maier, N. R. F. Qualitative differences in the problem solving of normal and partly decorticated rats. *Pap. Mich. Acad. Sci.*, 1939, 24, Part 4, 131-146.—Two tables and connecting runways afforded a situation for the integration of 4 experiences. A choice point at the exit of either table provided two possibilities for making errors. A battery of 20 tests was given to 56 normal rats and 26 rats with cortical injuries. None of the operated group made perfect scores markedly greater than chance expectancy, but

normal rats invariably solved both parts of the problem. The reduction in score caused by brain injury was greatest at the choice point altered from the previous day. When the first choice point was changed, the score was reduced 48% from that of normals, whereas at the unchanged point it was lowered 15%; however, when the second point was changed, the reduction was only 25%, and at the unchanged point 15%.—*N. R. Bartlett* (Brown).

5607. Montpelier, G. de. Les réflexes conditionnels et les phénomènes d'apprentissage chez les animaux. (Conditioned reflexes and learning in animals.) *J. Psychol. norm. path.*, 1938, 35, 50-69.—The author presents Pavlov's schema of the conditioned reflex and describes its difficulties and inadequacies. He discusses in detail the modifications made by Miller and Konorski and by Skinner.—*R. E. Perl* (New York City).

5608. Pieter, J. Intelligence quotient and environment. *Kwart. psychol.*, 1939, 11, 265-322.—During 1934-38 an investigation was carried on in Silesia (Poland) on the correlation between level of intelligence, as measured by the Terman individual scale and the Kaczynska, Otis, and other group scales, and environmental conditions. 1400 children with CA 13 were tested, as well as 300 more over and under 13. Environmental conditions were expressed quantitatively on a point scale giving an "environmental index" (EI). The EI was found to influence the IQ markedly. A coefficient of innate intelligence (CII) was obtained by dividing the IQ by the EI.—*T. M. Abel* (New York City).

5609. Pözl, O. Über die Erbllichkeit der geistigen Begabung. (The inheritance of mental ability.) *Wien. med. Wschr.*, 1939, 89, Teil I, 1-6.—The school records of 1162 Viennese school children were compared with those of their parents and grandparents. When both parents had received average marks their children tended to have average marks also, but when there were discrepancies in the grades of the parents the children tended to duplicate the performance of one parent rather than to maintain an average record. The similarity in marks of mothers and daughters was 77% greater than that of mothers and sons and 30% greater than that of fathers and sons, while the similarity in marks obtained by fathers and daughters was 12% greater than that of fathers and sons.—*P. L. Krieger* (Leipzig).

5610. Saetti, A. Il potere psichico dell'immaginazione. (The psychological power of imagination.) *Ric. psich.*, 1937, No. 8, 464-473.—*L. Canestrelli* (Rome).

5611. Simpson, B. R. The wandering IQ: fact or statistical illusion? *Sch. & Soc.*, 1939, 50, 20-23.—Psychologists at the University of Iowa claim that the IQ's of children from 2-6 improve greatly through attendance at nursery school, the gain being most impressive for children of average or inferior ability. Analysis of the data on which these claims rest shows a confused and unclear presentation of

material and failure to allow for common statistical sources of error. Table 1 of Wellman's basic article in *J. gen. Psychol.*, 1932, 41, 116-126, shows that children took their first test, on which they were classified into IQ groups, at ages ranging from 2 to 14, and assumes that the average mental ability is the same for all ages. The drop of 22 points in IQ between the age groups 5-14 is attributed to inadequacy of the scale and is corrected by transmutation into percentile scores, thereby magnifying gains for the middle group. In Table 2 the number of children taking successive tests is shown to decrease from 624 to 33 (note disagreement with Table 1) which small final group can hardly be assumed to be truly representative of the whole, nor can they be assumed to be drawn wholly from the average group. Perhaps the rise of 14 points in IQ average is explainable by survival of the fittest. Even if the claim is valid, why should the improvement be confined to the average group?—*M. Lee* (Chicago).

5612. Soest, H. Dressurversuche mit Ciliaten und Rhabdocoelen Turbellarien. (Training experiments with ciliates and with rhabdocoelous turbellarians.) *Z. vergl. Physiol.*, 1937, 24, 720-748.—Bramstedt's "protozoan conditioning" tests were repeated with ciliates and a flatworm. *Paramecium caudatum* at first spent equal times in the lighted and darkened halves of a circular area, but after a 45-min. period with shock upon each entrance into the light, avoidance reactions to light alone were obtained. Without the shock, extinction appeared within 20 min. In these subjects, more time was spent in the dark even after an attempt to reverse the problem by associating shock and dark. Dark avoidance could not be established in new subjects by combining hyper- or hypo-optimal temperatures or electrical shocks with entrance into the dark half of the area. With the ciliate *Spirostomum* avoidance of light was established by using either mechanical vibration or shock, and in a few cases a similar dark avoidance was established. Although *Stentor coeruleus* initially did not react to sudden presentation of weak light, when repeatedly combined with electrical stimulation this stimulus finally caused both free-swimming and attached animals to contract. The turbellarian flatworm *Stenostomum* initially spent equal times in the dimly lighted and dark halves of the area, but light avoidance was established more readily through combination of light and shock than in the case of the ciliates. Extinction also occurred rapidly in this flatworm. A weaker avoidance of the dark was similarly established. The fact that conditioning in comparable tests was more readily effected in *Stenostomum* than in ciliates is attributed to the presence of a nervous system in the flatworm.—*T. C. Schneirla* (New York University).

5613. Teagarden, F. M. The intelligence of diabetic children with some case reports. *J. appl. Psychol.*, 1939, 23, 337-346.—A critical review of the literature reveals that there is little adequate evidence for the belief that diabetic children are intellectually superior. Examination of 6 additional

cases also failed to confirm such a point of view.—*E. Ghiselli* (Maryland).

5614. Tolman, E. C. Prediction of vicarious trial-and-error by means of the schematic sow-bug. *Psychol. Rev.*, 1939, 46, 318-336.—An experiment is described in white-black and white-gray discrimination by rats, in which considerable "looking-back-and-forth" or vicarious trial-and-error (Muenzinger's terminology), hereafter called V.T.E. behavior, occurred. 3 groups of 10 rats each were used. The correct door was white for all groups, but the incorrect door to be distinguished from it was black for one group, medium gray for another, and light gray for the third. The white-black group learned best, the white-medium learned next, and the white-light gray failed to learn at all. The first-named group showed the most V.T.E. behavior, the second next, and the third least. The time curves show the same order as the V.T.E. curves. The white-black group showed the V.T.E. behavior sooner than the others. The author presents a theoretical explanation of these results in terms of the mechanics of a hypothetical "schematic sow-bug," following out the assumption that all higher organisms are tropistic in a basic sense. Different strengths of hunger, clearness of perception, degrees of learning, etc., combine to determine the amount of V.T.E. that will occur.—*A. G. Bills* (Cincinnati).

5615. Trendelenburg, W. *Intelligenzprüfungen an Affen*. (Testing the intelligence of apes.) (Film.) Berlin: Reichstelle für den Unterrichtsfilm, 1927-1931. 488 ft., 16 mm. (silent). Sale price on request.—Rhesus monkeys and chimpanzees are photographed in the following test situations: opening of puzzle boxes, pulling in strings and sticks to which a visible or hidden cherry is attached, delayed reaction to a cherry placed under one of two flowerpots, Umweg situations with simple and complex barriers, and self-inspection with a mirror.—*L. F. Beck* (Oregon).

5616. [Various.] Is our national intelligence declining? *Ment. Hyg., Lond.*, 1939, 5, 7-24.—Includes papers by L. S. Penrose, The genetic aspect of the question; Alec Rodger, The importance of apparent decline and its treatment; and J. H. Nicholson, Non-genetic aspects.—*R. R. Willoughby* (Brown).

5617. Verlaine, L. *Les facultés de synthèse chez les animaux*. (The synthetic faculties of animals.) *Scientia, Milano*, 1939, 65, 262-272.—Describing and explaining the conduct of animals cannot as yet be done without referring to psychic agents. Experimental analysis of those agents meets the requirements of science only in such cases as deal with the representation of external stimuli, which is a symbolic one and reveals the synthetic faculty we have to ascribe to animals, in contrast to the assumptions of classical theories.—*E. Franzen* (S. Illinois State Normal University).

[See also abstracts 5440, 5455, 5668, 5711, 5734, 5752, 5757, 5827, 5836, 5933, 5944.]

MOTOR AND GLANDULAR RESPONSES (incl. Emotion, Sleep)

5618. Barmack, J. E. The length of the work period and the work curve. *J. exp. Psychol.*, 1939, 25, 109-115.—After a 2½-hour practice period, 28 subjects added pairs of 6-place numbers for 4, 8, 12, and 16 15-minute periods. At the end of each period they filled out a rating sheet indicating their feelings of boredom, strain, irritation, fatigue, and attentiveness. It was found that the rate of work for the 1-hour period was faster than the rate of the initial hour of the 2-, 3-, and 4-hour periods. The initial hourly rate of the 2-hour period was greater than that of the 3-hour period. The initial hourly rate of the 4th period was about the same as that of the 2-hour period. The feeling-tone judgments of each of the six rating scales become progressively unfavorable for all 4 work periods. The work output correspondingly decreases in all but the shortest period. This evidence adds to the ambiguous character of the interrelationship between output and feeling tone, viz., under certain conditions, feeling tone and output may vary together; nevertheless, output may vary independently of feeling tone.—*H. W. Karn* (Pittsburgh).

5619. Bonjour, J. A propos de la théorie psychovasomotrice des verrues et de l'eczéma. (Apropos of the psychovasomotor theory with respect to warts and eczema.) *Rev. méd. Suisse rom.*, 1939, 59, 366-371.—The author, who had specialized in the curing of warts by suggestion, believes that the psychism cannot cure the wart unless vasomotricity is acted upon. His observations have demonstrated that the cure takes place only because a high arterial tension and the arterial vasoconstriction become normal.—*E. Claparède* (Geneva).

5620. Bremer, F. *L'activité cérébrale au cours du sommeil et de la narcose*. (Cerebral activity in the course of sleep and of narcosis.) *Bull. Acad. Méd. Belg.*, 1937, 68-86.—This research on the cat indicates that mammalian sleep is essentially characterized by the disruption of a certain cortical tonus, normally maintained by the arrival of afferent impulses. This disruption is attributable to a "de-afferentation," an interruption in the receptor mechanisms for the arriving corticopetal impulses. Indeed, transection of the brain stem at the junction of the mesencephalon and the medulla produces effects very similar to the profound sleep resulting from organic de-afferentation. There is observable myosis, and the electro-encephalogram is composed of regular waves of low frequency (10-15/sec.), with irregular pauses, as in normal or barbituric sleep, whereas waking activity is marked by an uninterrupted sequence of irregular waves of high frequency (up to 60/sec.). Under chloroform or ether anesthesia these waves are present, but decrease in amplitude until their complete disappearance in profound narcosis.—(Courtesy *Année psychol.*)

5621. Brooks, M. The etiology of seasickness. *Med. Rec., N. Y.*, 1939, 150, 23-26.—The author

emphasizes that seasickness, or any other form of illness related to movement in 3 planes, is not a clinical entity; that predisposing causes are race and personality types; and that the active causes may be intrinsic, specifically, psychic or somatic disturbances, or extrinsic, specifically, the factors of physical movement and stimulation. He believes that efficient treatment depends upon adequate consideration of the significant factors in the individual case.—*M. H. Erickson* (Eloise Hospital).

5622. **Burr, H. S.** Evidence for the existence of an electrodynamic field in living organisms. *Science*, 1939, 89, 403.—Abstract.

5623. **Cann, S. D.** The effect of voluntary leg activity upon the knee-jerk; further experiment. *J. exp. Psychol.*, 1939, 25, 18-47.—In this experiment a subject practiced contracting the flexors of the percussed (right) leg and the extensors of the contralateral (left) leg in response to a buzzer signal at such a time interval before the knee-jerk blow that the voluntary kicks inhibited the knee-jerk. In most of the cases tested without the buzzer or voluntary kicks after such practice, there is a change in the relative height and latency of the two jerks, consisting of a decrease in height and increase in latency of the right as compared with the left knee-jerk. This change lasts only through series of about 20 or 22 records, half from each leg; or approximately 11 minutes. That it is due to the voluntary practice is shown by comparison with similar practice and test series taken later, in which no buzzer was sounded and no voluntary kicks were made.—*H. W. Karn* (Pittsburgh).

5624. **Carlo, C.** Gli istinti sessuale e materno e l'anima. (The sexual and maternal instincts and the soul.) Bologna: L. Cappelli, 1937. Pp. 253. L. 50.

5625. **Dobrzyńska-Rybicka, L.** Un cas d'automatisme graphique. (A case of automatic handwriting.) *Kwart. psychol.*, 1939, 11, 41-54.—A detailed case of automatic handwriting is presented. The author shows the role played by having the experimenter control conditions and the influence of both conscious and unconscious motivation of the subject. An explanation of the development of automatic from normal writing is made.—*T. M. Abel* (New York City).

5626. **Granaat, D.** The pupil-reflex during food digestion. *Acta brev. neerl. Physiol.*, 1939, 9, 2/3, 46-48.—(*Biol. Abstr.* XIII: 7643).

5627. **Himwich, H. E., Martin, S. J., Alexander, F. A. D., & Fazekas, J. F.** Electro-cardiographic changes during hypoglycemia and anoxemia. *Endocrinology*, 1939, 25, 536-541.—Electro-cardiographic changes showed in dogs in both hypoglycemia and anoxemia that an initial transitory sympathetic influence was followed by parasympathetic predominance. This increased activity of the autonomic nervous system was associated with a depressed metabolism of the brain as indicated by diminished cerebral utilization of oxygen. It is concluded that with depression of the brain metabolism, the pre-

dominant and ultimate effect on the autonomic nervous system is a release of parasympathetic influence.—*W. J. Brogden* (Wisconsin).

5628. **Hinsey, J. C., & Markee, J. E.** Reflexes in the spinal monkey. *J. comp. Neurol.*, 1938, 69, 471-485.

5629. **Hohmeyer, H.** Über die Höhenfestigkeit der Taube. (The stability of the pigeon at high altitudes.) *Luftfahrtmedizin*, 1939, 3, 161-166.—The change in the resting pigeon at high altitudes shows itself in the increased heart rate. The greatest altitude attainable for a short period by either a rapid or a slow ascent was about 12,000 m., the maximum permanent altitude about 10,500 m. With the exception of the special respiratory technique of the horizontally lying rabbit, the respiratory mechanism of the pigeon at great heights appears to be much superior to that of the rabbit.—*P. L. Krieger* (Leipzig).

5630. **Hoskins, R. G., Levine, H. M., & Bevin, S.** The relationship of the male sex hormone to the level of bodily vigor in senility. *Endocrinology*, 1939, 25, 143.—In 16 experiments on 9 senile male rats injections of testosterone propionate failed to result in any significant augmentation of muscular activity as shown by self-registering activity cages.—*W. J. Brogden* (Wisconsin).

5631. **Hyndman, O. R.** Physiology of the vestibular labyrinth. *Arch. Otolaryngol.*, Chicago, 1939, 29, 759-819.—A review article dealing with the experimental observations on animals, observations on man, the physical nature of the inner ear, and the role of the cerebellum in vestibular reactions.—*W. J. Brogden* (Wisconsin).

5632. **Iandolo, C.** La sindrome emotiva e i riflessi ormonici. (The emotional syndrome and hormonal reflexes.) *Studium*, 1937, 37, No. 4, 77-79.—*L. Canestrelli* (Rome).

5633. **Kaufman, N.** The ant city. (Film.) New York: UFA Films, Inc., 729 7th Ave., 1937. 518 ft., 16 mm. (silent or sound). \$50 sale, \$3.50 rental.—First a cross section of an ant-hill reveals its intricate structure. Then the three types of ants—queen, males, and workers—are depicted and their function in the colony is explained. The workers are shown building a nest, guarding the eggs, foraging, "milk-ing" aphids, fighting, and rearranging the nest as a storm approaches. In the sound version, sections of the narrative are anthropomorphic.—*L. F. Beck* (Oregon).

5634. **Kaufman, N.** Moving X-rays. (Film.) New York: UFA Films, Inc., 729 7th Ave., 1937. 397 ft., 16 mm. (silent or sound). \$50 sale, \$3.50 rental.—The film opens with a sequence showing the discovery and modern use of the X-ray. By a combination of a powerful X-ray tube, an ultra-fast lens, and reduced shutter speed, shadowgraphs on a fluorescent screen are photographed with a motion-picture camera. The actions of mice, cats, monkeys, and humans are depicted through the moving X-rays. Articulation of the bones, beating of the

heart, and peristaltic movements of the stomach and intestines of man are shown in detail.—*L. F. Beck* (Oregon).

5635. **Kaufman, N.** *Sensitivity of plants.* (Film.) New York: UFA Films, Inc., 729 7th Ave., 1937. 518 ft., 16 mm. (silent or sound). \$50 sale, \$3.50 rental.—Through the use of normal and time-lapse photography, the reactions of plants to a variety of stimuli are shown. Mustard and lupine seedlings orient to light, gravity, and carbon dioxide. The stem of the bean plant twines around a support and the leaves display quotidian reactions of "sleeping" and "wakening." With the aid of a radio condenser, the response of the bean plant to singing and the normal movements of growth are made audible. The film ends with a series of experiments on the sensitive plant *Mimosa pudica*. It is shown that a strong local stimulus is followed by a spread of excitation along several leaves. When exposed to ether vapor, the leaves first expand and then lose their sensitivity.—*L. F. Beck* (Oregon).

5636. **Koch, A.** *Über die Arbeitsfähigkeit des Menschen bei O₂-mangel entsprechend einer Höhe von 4000-8000 m.* (Human working capacity under anoxemia corresponding to an altitude of 4000-8000 m.) *Luftfahrtmedizin*, 1939, 3, 204-215.—The oxygen intake and respiratory volume per minute were measured with Knipping's spiograph and ergometer. The values registered at the various stages of work for persons between 20 and 30 years were normal at these altitudes.—*P. L. Krieger* (Leipzig).

5637. **Kuo, Z. Y.** *Studies in the physiology of the embryonic nervous system. II. Experimental evidence on the controversy over the reflex theory in development.* *J. comp. Neur.*, 1939, 70, 437-459.—In a critical discussion of the "local reflex" versus the "total pattern" theory of embryonic development, Kuo claims that proponents of each of these points of view are lacking in essential factual evidence to support their contentions. In this study he has found many conditions which produce marked shifts in the proportions of spontaneous and experimentally induced responses in chicks; he has also shown that these factors affect the relative number of local reflexes as contrasted with massive movements of various degrees of complexity. Some of the conditions are: age or developmental stage; health conditions; bodily position; temperature and oxygen supply; curarization; intensity of stimuli; time intervals between stimuli; number of applications of stimuli; strength and magnitude of initial movements; the active body parts in different stages of development; the nature of movements just prior to stimulation. A plea is made for refinement of experimental methods and gathering of a more comprehensive array of facts.—*C. P. Stone* (Stanford).

5638. **Larson, L. A.** *A study of the validity of some cardio-vascular tests.* *J. exp. Educ.*, 1939, 7, 214-220.—This research involved the application of 11 cardio-vascular tests to different groups of

college subjects, some of whom had "good" cardio-vascular efficiency (Olympic swimmers) and others "poor" cardio-vascular efficiency (infirmary patients). Conclusions concerning the validity of the tests are as follows: (1) The McCurdy-Larson organic efficiency test is the most valid test of cardio-vascular efficiency. The Stone and Tigerstedt tests are lower in validity, yet have significant validity. (2) The differences in pulse rate test, the pulse pressure \times pulse rate test, and the pulse pressure \times pulse rate divided by diastolic test have slight validity. (3) The McCloy test, Barach test, basal metabolic test, differences in systolic test, and Crampton test are invalid. (4) The "short organic efficiency test" developed in the present study has a higher degree of validity than any of the tests except the McCurdy-Larson organic efficiency test.—*H. W. Karn* (Pittsburgh).

5639. **Leonard, S. L.** *Induction of singing in female canaries by injections of male hormone.* *Proc. Soc. exp. Biol., N. Y.*, 1939, 41, 229-230.—5 mg. of testosterone propionate were injected into the breast muscles of female canaries in 0.2 cc. doses. In 4 of the 5 birds used the typical male song was sung by the injected birds; the fifth bird showed normal male behavior, but did not sing. The male behavior disappeared with withdrawal of the hormone. The injections exerted no permanent deleterious effects on the reproductive behavior of the birds.—*H. Peak* (Randolph-Macon).

5640. **Maschke, H.** *Die mikrometrische Verfolgung eines bewegten Zieles von wechselnder Geschwindigkeit.* (The micrometric tracing of a moving target of variable speed.) *Arch. ges. Psychol.*, 1939, 103, 299-349.—The problem was to match the speed and direction of a presented target by means of a hand-operated device. The general tendency is for the latter to lag behind the former when the lack of constant speed is once observed. Any rhythmical tendency in the stimulus is responded to with fewer errors; fatigue effects are easily produced.—*H. D. Spoerl* (American International College).

5641. **Mauro, V.** *Correlazione tra insufficienza muscolare e attitudine psicomotoria.* (Correlation between muscular inadequacy and psychomotor aptitude.) *Rass. med. Lav. industr.*, 1937, 1, 63-68.—The author examined 332 young men with respect to their physical development and their achievements on psychotechnical examinations. He found a correlation between muscular inadequacy and psychomotor aptitude.—*L. Canestrelli* (Rome).

5642. **Miles, W. R.** *The steady potential of the human eye in subjects with unilateral enucleation.* *Science*, 1939, 89, 403.—Abstract.

5643. **Pollack, L. J., Finkelman, I., & Sherman, I. C.** *Electrokinetic in endolymph as possible cause of "galvanic" falling and past pointing.* *Proc. Soc. exp. Biol., N. Y.*, 1939, 41, 578-580.—Differences in the effective conditions of responses of nerves to electrical stimulation and of responses to the passage of electrical currents through the head

suggest that the latter responses do not involve stimulation of the vestibular nerve or its connections. Because relationships of current, duration of stimuli, and interval between stimuli similar to those described in electrokinetic phenomena are also found in the production of the experience of falling or past pointing when a galvanic current is passed through the head, it is suggested that an electrokinetic change in the endolymph is responsible for the stimulation of sensory end organs under these conditions.—*H. Peak* (Randolph-Macon).

5644. Raneo, A. Il ricambio del fosforo nel lavoro mentale. (The metabolism of phosphorus during mental work.) *Studium*, 1937, 27, No. 5, 97-101.—Prolonged mental work shows a constant increase of the total amount of phosphorus in the blood and urine.—*L. Canestrelli* (Rome).

5645. Ranson, S. W. Somnolence caused by hypothalamic lesions in the monkey. *Arch. Neurol. Psychiat., Chicago*, 1939, 41, 1-23.—The theory of a sleep center is based upon a misinterpretation of facts. If the term "waking center" be used instead and the center placed in the hypothalamus, there is no conflict between this concept and that of Kleitman. When the hypothalamus is thrown out of action there is quiet and relaxation favoring the onset of sleep. Destruction of the hypothalamus causes somnolence. This "waking center" on stimulation produces combined sympathetic and somatic excitation.—(Courtesy *J. ment. Sci.*).

5646. Reichel, H. Die Mechanik des Herzens bei Ermüdung und Erholung. (Cardiac mechanics in fatigue and recuperation.) *Z. Biol.*, 1939, 99, 527-539.—The idea of "pure change in strength" is delimited, and "cardiac strength" is brought into relationship to the absolute muscular power. The comparative effects of fatigue and recuperation and of acetylcholin and adrenalin on cardiac mechanics are studied.—*P. L. Krieger* (Leipzig).

5647. Schneirla, T. C. The behavior pattern of Central American army ants. (Film.) Bethlehem, Pa.: Psychological Cinema Register, Lehigh University, 1939. 650 ft., 16 mm. (silent). \$30 sale.—Army ants (*Eciton*) in the Panama Canal Zone are photographed to show the nature and basis of representative insect behavior patterns ("instincts"). The principal reactions portrayed are the formation of bivouacs, the laying down and following of chemical trails, raiding activities, and the development of migratory movements. In appropriate ways it is shown how super-added "social stimulation" may lead to maximal raiding and daily migration under one set of conditions, and how the absence of an active brood is responsible for non-migratory behavior in the colony under other conditions. The film terminates with the conclusion that the pattern of *Eciton* behavior depends fundamentally upon the character of the queen's egg-laying cycle and the nature of the worker. A mimeographed guide accompanies the film.—*B. Johnson* (Oregon).

5648. Schulze, W. Über das Verhalten des galvanischen Hautreflexes bei Ulcus ventriculi,

Ulcus duodeni und Gastritis. (The behavior of the galvanic skin reflex in gastric ulcer, duodenal ulcer, and gastritis.) Kiel: Med. Diss., 1936. Pp. 22.

5649. Shoemaker, H. H. Effect of testosterone propionate on behavior of the female canary. *Proc. Soc. exp. Biol., N. Y.*, 1939, 41, 299-302.—The dominance order of 6 female canaries was determined by observing their tendency to retreat when pecked by other birds. 0.076 mg. of testosterone propionate was administered in oil daily to the 3 lowest ranking birds. After 32 days these birds took the highest dominance ranks, 4, 5, and 6. Other male traits appeared, such as singing, courtship behavior, and certain changes in the anal region. Reproductive functions were suppressed.—*H. Peak* (Randolph-Macon).

5650. Silver, M. L. Electrical anesthesia in rats. *Proc. Soc. exp. Biol., N. Y.*, 1939, 41, 650-651.—Dry cells, a rheostat, milliammeter, and reversing switch were connected in series with a rat through non-polarizable, zinc-zinc sulfate electrodes. The cathode was placed on the roof of the mouth and the anode inserted 1 cm. in the rectum. A rat anesthetized with ether before application of a current remained quiescent as long as the current flowed and showed no response to severe noxious stimuli for tests lasting as long as 4 hrs. Control animals also etherized emerged from anesthesia in 5 to 10 min. Anesthesia was terminated by reducing the current from 10 to 4 mA during one min., then reversing the current for 10 sec. Repeated periods of electroanesthesia resulted in no detectable physiological defects.—*H. Peak* (Randolph-Macon).

5651. Stehfen, M. Tierexperimenteller Beitrag zum Verhalten von statischen und statokinetischen Reflexen im Unterdruck. (Animal experiments on the postural and righting reflexes at lowered atmospheric pressure.) *Luftfahrtmedizin*, 1939, 3, 191-203.—Rabbits showed no disturbance of the postural reflex of the head up to 5000 m. From 6000 m. on, the latent period increased and the course of the reflex was slowed. It ceased at 9000-10,000 m. The earliest disturbance occurred in the dorsal position, followed in order by the hanging position, head down, then head up, and finally in the normal sitting position. The postural reflex of the trunk, i.e., righting after the forced lateral position, was slowed at 5000 m., and at 7000-8000 m. the animal could be brought to its feet only by an additional stimulus (slapping). The postural reflex of the trunk was usually affected earlier than that of the head. The power to spring—extension of the forelegs with a backward movement of the animal—first showed definite limitation above 7000 m. and disappeared at 9000-10,000 m.—*P. L. Krieger* (Leipzig).

5652. Sturtevant, A. H., & Beadle, G. W. An introduction to genetics. Philadelphia: Saunders, 1939. Pp. 391. \$3.25.—The present elementary text presupposes an introductory knowledge of biology. The subject matter is developed logically through 23 chapters and an appendix on probability,

with problems for solution at the close of each chapter.—*W. S. Hunter* (Brown).

5653. Tilquin, A. *La confection du cocon chez Argiope bruennichi: ses rapports avec la construction de la toile.* (The making of the cocoon in *Argiope bruennichi*: its relation to the construction of the web.) *J. Psychol. norm. path.*, 1938, 35, 69-106.—The cocoon-building activity of 8 spiders was observed and is described in great detail. The web and the cocoon of *Argiope bruennichi* are very different achievements. However, there are not two different organizations which work at different times, but the same behavior which, functioning under different conditions, produces different results.—*R. E. Perl* (New York City).

5654. Voigt, H. *Gestaltpsychologische Untersuchungen zur menschlichen Motorik.* (Gestalt psychological investigations of human motor expression.) *Arch. ges. Psychol.*, 1939, 103, 231-265.—Subjects were photographed in the act of making an extensive gesture in the form of a figure 8 with the index finger. To the finger was attached a surgical lamp, and the path traced appeared as a succession of dashes, since the cameras were screened by an episcotister. From the characterological point of view this method affords numerous features that are open to later analysis. Apart from the more extensive motor region involved, the procedure is freer than graphology and open to more significant detailed study. Speed of movement is recorded by the lengths of the individual dashes.—*H. D. Spoerl* (American International College).

5655. Woodring, P. D. *A technique for the investigation of direction orientation in human beings.* *Pap. Mich. Acad. Sci.*, 1939, 24, Part 4, 147-152.—This paper is a report of tentative findings in a research project still in progress. 75 white and 21 negro subjects were instructed to indicate on a 5-inch circle the direction of various designated points familiar to the subjects but not visible from their location. The points ranged from objects just outside the room to distant cities. The distribution of average errors was distinctly bimodal, with a range from 10° to 174°. No significant correlations were found with age, sex, IQ, or race.—*N. R. Bartlett* (Brown).

5656. Zaeper, E., Lampe, R., & Koch, A. *Atmung und Kreislauf bei Ruhe und Arbeit in grosser Höhe.* (Respiration and circulation during rest and work at high altitudes.) *Luftfahrtmedizin*, 1939, 3, 167-182.—There are essential differences between anoxemia during muscular work and anoxemia during physical rest. In the former case, the provision of oxygen for the body is much more difficult and its lack felt much more than under corresponding conditions when the body is at rest.—*P. L. Krieger* (Leipzig).

[See also abstracts 5450, 5460, 5486, 5493, 5496, 5497, 5498, 5529, 5542, 5565, 5595, 5600, 5602, 5661, 5674, 5688, 5717, 5745, 5762, 5790, 5792, 5854, 5855, 5866, 5894, 5900, 5902, 5949, 5963, 5967.]

PSYCHOANALYSIS, DREAMS, HYPNOSIS

5657. Bergler, E. *Psicoanalisi e "sentimento d'aver ragione."* (Psychoanalysis and "the feeling of being right.") *Arch. gen. Neurol. Psychiat.*, 1937, 18, 21-31.—The author describes some of his work on the unconscious motifs which lead individuals to feel that they are right regardless of the truth of the situation. He also describes certain mechanisms which characterize the unconscious opposition present in psychic actions and which may be used to explain the way in which men deceive themselves.—*R. Ricci* (Rome).

5658. Calvis, E. *La seduta medianica. Trattato teorico-pratico.* (The mediumistic seance. Theoretico-practical treatise.) Milan: Hoepli, 1938. Pp. 263. L. 15.—*R. Ricci* (Rome).

5659. Carrington, H. *Psychic science and survival.* New York: American Psychical Institute, 1939. Pp. 90. \$1.00.

5660. Erickson, M. H. *The applications of hypnosis to psychiatry.* *Med. Rec., N. Y.*, 1939, 150, 60-65.—A brief review of the history of hypnosis, of its various general considerations and of the problems of its technique is given, followed by an effort to indicate the potentialities of the experimental application of hypnosis to psychiatric problems. Especially emphasized are the applications of hypnotic techniques to such problems as cerea flexibilitas, amnesia, hypnotic and hysterical anesthesia, psycho- and neurophysiological manifestations, the isolation of specific personality problems, experimental studies of regression, psychic catharsis and abreaction, the investigation and demonstration of the psychodynamics of behavior, and the investigation of post-hypnotic phenomena. Material is quoted from the literature to illustrate these points and a 22-item bibliography is appended.—*M. H. Erickson* (Eloise Hospital).

5661. Feuerborn, H. J. *Der Instinktbeffriff und die Archetypen C. G. Jungs.* (The concept of instinct and Jung's archetypes.) *Biol. gen.*, 1939, 14, 456-506.—The difficulty of connecting psychic events with their physiological bases does not justify ignoring the existence of the latter. It is admitted that some psychic events can at present be described only in psychological terms, but no final solution is possible without an exact physiological foundation. Every physiological event is a mechanism subject to causal laws, regardless of its complexity or obscurity. "Gestalt" and "goal set" are only auxiliary concepts, and Uexküll's "environment" is a category which cannot be understood without relation to genetics and evolution. Human and animal psychology should depend more on the phylogenetic approach in the study of individuals. In both fields psychological concepts like instinct and the question of the factors in organic evolution should be clarified.—*P. L. Krieger* (Leipzig).

5662. Isaacs, S. *Criteria for interpretation.* *Int. J. Psycho-Anal.*, 1939, 20, 148-160.—Hypotheses and conclusions can be evaluated only by reference

to the methods upon which they are based. Criteria for the validity of the psychoanalytic interpretation must be obtained from reference to the psychological data constituting the material of the work, to the perception of unconscious meanings from behavior observed, and to the testing and verification of perceptions formed. After discussion of these points the author directs attention to the scientific limitations of psychoanalysis, specifically, the admixture of responses and observations, and the impossibility for repetition and for joint observation by others. The conclusion is reached that the intensive magnitude of the work, the wealth of material concerning minute interrelations of data, the variety of situations and the number of hours of observation, all warrant a claim for both a high qualitative and quantitative status.—*M. H. Erickson* (Eloise Hospital).

5663. Lorand, S. Role of the female penis fantasy in male character formation. *Int. J. Psychoanal.*, 1939, 20, 171-182.—Study of the dream material from male patients who have retained the fantasy of the female penis shows that, in addition to the oral and anal characteristics described by others, their attitudes toward women are marked by sexual and toward men by social maladjustments. These maladjustments are manifested by a constant quest in their social life for a motherly father as a means of mastering castration anxiety. A 16-item bibliography is appended.—*M. H. Erickson* (Eloise Hospital).

5664. Payne, S. M. Some observations on the ego development of the fetishist. *Int. J. Psychoanal.*, 1939, 20, 161-170.—In this study, based upon the analysis of two cases of fetishism and observations on a third, the author undertakes to show "that the necessity to make a defense against an archaic sexual aim is one of the determinants of fetishism—the aim being to kill the love object; to describe the type of situation in which the fixation of this sexual aim occurs; and to make some observations on the form of ego development which accompanies the adoption of this abnormal sexual behavior." Detailed material is cited from one of the case histories to illustrate these various points, and the author concludes "that the psychology of the fetishist is dominated by castration fear," and that this fear may be traced "to infantile situations connected with unusual tension of the aggressive impulses inseparably bound up with sexuality."—*M. H. Erickson* (Eloise Hospital).

5665. Reiser, O. L. Emergence, dimensionality, and extra-sensory perception. *Psyche, Lond.*, 1937, 17, 143-150.—Some people have been unable to approach Rhine's conclusions with an open mind because of feeling that they could not be understood even if they were established. This paper attempts to show that such conclusions can be reconciled with longer-established scientific findings if both are understood in terms of a theory which accepts emergent evolution, non-Aristotelian logic, and the notion of a psychic ether.—*I. L. Child* (Harvard).

5666. Servadio, E. Le cerf-volant, le feu et la foudre. (The kite, fire and the thunderbolt.) *Rev. franç. Psychanal.*, 1938, 10, 421-446.—The kite, fire, and the thunderbolt occurring in folklore, legend, and fiction are interpreted psychoanalytically as symbolizing the soul, life, creative urge, power, revolt, and domination. A single principle underlies these meanings: the affirmation of individual virility, represented for the unconscious by phallic aggression and generative power.—*D. G. Ryans* (William Woods College).

5667. Warrick, F. W. Experiments in psychics. New York: Dutton, 1939. Pp. 430. \$7.50.—"Practical studies in direct writing, supernormal photography and other phenomena mainly with Mrs. Ada Emma Deane." This work is intended for experienced students of psychic phenomena.—(Courtesy *Publishers' Weekly*).

[See also abstracts 5619, 5625, 5721, 5765, 5844, 5922.]

FUNCTIONAL DISORDERS

5668. Abel, T. M. Subnormal girls with discrepant test patterns. *J. appl. Psychol.*, 1939, 23, 398-404.—The performance of subnormal girls who had higher IQ's on a non-language than on a language test was compared with that of a comparable group with the opposite test pattern. The former group was found to be superior on the Goodenough drawing, the Army designs, Knox cubes, and sewing tests, while no significant differences were manifest on the Monroe reading and the Binet vocabulary tests.—*E. E. Ghiselli* (Maryland).

5669. Allen, C. Paranoid psychosis with adrogenital virilism successfully treated by adrenalectomy. *Brit. med. J.*, 1939, 1220-1224.—*W. J. Brogden* (Wisconsin).

5670. Andaló, A. Studio critico-letterario e medico-psicologico sulle tossicomanie di alcuni grandi poeti. (A critico-literary and medico-psychological study on toxicomania in certain major poets.) *Ann. Osp. psichiat. Perugia*, 1937, 31, 1-58.—The author examined the anomalies to be found in the psyche and character of certain foreign major poets who were subject to chronic opium poisoning, trying to find in the anomalies themselves the possible causes of the toxicomania. He reviewed their literary production to see if their work revealed the influence of the drug on their creative capacities and their particular fantasy patterns, but he found that the unusual elements in their work were due rather to abnormalities in their psyches than to the effect of opium. He believes that their art would have been greater and more vigorous if they had not been subject to the debilitating effect of opium. A brief résumé is given of current legal procedure with respect to stupefying drugs.—*L. Canestrelli* (Rome).

5671. Anderson, F. N., & Mambar, R. Post-encephalitic behavior. *Soc. Work Technique*, 1939, 4, 67-72.—The type of behavior which often follows epidemic encephalitis (irritability, temper tantrums,

emotional instability, stealing, cruelty, exaggerated sexual impulses, and generally, inadequate inhibitions and anti-social tendencies) has received the name "postencephalitic behavior," but is not necessarily the result of encephalitis only. Among the children exhibiting this type of behavior who have been studied at the Child Guidance Clinic in Los Angeles, in only a few cases has a definite diagnosis of encephalitis been made. There has been found rather an interplay of factors, none purely resultant, adding together to form the personality problem. Treatment consists in understanding and careful supervision, a routine of living which is varied but firm, an individualized school program, medical attention, and specific psychotherapy where feasible. The results of treatment are successful in about 25% of the cases. It is believed that where the behavior pattern is not a result of a sudden infectious process but is a product of factors effective over a long period of time, the instances of successful treatment might be made more frequent.—*M. Keller* (Butler Hospital).

5672. **Ansaldi, I. B.** *Sindrome amnésico-fabulatorio-sífilis cerebral.* (Cerebral syphilis with confabulatory amnesia.) *Bol. Inst. Psiquiat.*, 1938, 2, 131-150.—*R. M. Bellows* (Maryland).

5673. **Arnott, D. W. H.** *Anxiety states in general practice.* *Med. J. Aust.*, 1939, 1 (26th year), 297-300.

5674. **Asperger, H., & Goll, H.** *Über einen Fall von Hemichorea bei einem eineiigen Zwillingpaar. Gleichzeitig ein Beitrag zum Problem der Individualität bei erbgleichen Zwillingen.* (A case of hemichorea in a pair of identical twins, together with a contribution to the problem of individuality in twins of identical heredity.) *Arch. Kinderheilk.*, 1939, 116, 92-115.—Each of two 13-year-old girls, identical twins, developed chorea with cardiac complications at approximately the same age. Of the twins one was right-handed, the other left-handed, and mirror reversal was present in a number of other physical characteristics. Choreic symptoms were in each case largely confined to one side of the body; in both cases this was the side of the dominant hand. A detailed account of the resemblances and differences between the two in respect to a large number of anatomical, physiological, intellectual, and personality traits is presented, together with a discussion of the significance of these findings for the understanding of personality differentiation.—*F. L. Goodenough* (Minnesota).

5675. **Basile, G.** *L'elemento psichico nella cura del diabete mellito.* (The psychological element in the treatment of diabetes.) *Ann. Ravasini*, 1939, 22, No. 3. Pp. 5.—*R. Ricci* (Rome).

5676. **Blalock, J. R.** *Psychiatric aspects of physical illness.* *Virginia med. Mon.*, 1939, 66, 92-94.—This writer asserts that one third of the patients coming for attention present no primary physical disease. He alleges that the practicing physician is inclined to neglect emotional and psychological conditions. Mental ills are ascribed to stressing situa-

tions producing failures of adjustment. Citation is made of personal experiences with patients presenting psychogenic factors.—*A. Chapanis* (Yale).

5677. **Brockhausen, K.** *Erbbiologische Untersuchungen über depressive Psychosen des Rückbildungsalters.* (Genetic studies of depressive psychoses in the involutional period.) *Allg. Z. Psychiat.*, 1939, 112, 179-183.—In contrast to phasic melancholias, depressions occurring for the first and only time in the involutional period do not denote manic-depressive insanity. They are psychoses of a special class.—*P. L. Krieger* (Leipzig).

5678. **Brown, M.** *Some fundamental considerations in the psychoneuroses.* *Ill. med. J.*, 1939, 75, 361-366.

5679. **Cardona, F.** *Il test di Rorschach nella diagnostica psichiatrica.* (The Rorschach test in psychiatric diagnosis.) *Riv. Patol. nerv. ment.*, 1937, 49, No. 2, 252-267.—The author used the Rorschach tests in a number of experiments with patients, but found them not a valid aid for clinical diagnosis. However, the manner in which the patients reacted to the tests was not without clinical significance, in that every patient, when beginning the tests, exhibited certain expressions and peculiar significant actions characteristic of the morbid syndrome with which he was affected.—*L. Canestrelli* (Rome).

5680. **Cassinelli, B.** *Storia della pazzia.* (The history of insanity.) Milan: Corbaccio, 1937. (Rev. ed.) Pp. 547. L. 25.—The book includes the following sections: reason and insanity, insanity in men and in animals, insanity and art, the history of psychiatry, and insanity and the law.—*R. Ricci* (Rome).

5681. **Cazzamalli, F.** *Le allucinazioni creative.* (Creative hallucinations.) *G. Psicol. Neuropat.*, 1937, No. 3, 336-344.—The author lists examples of visual and auditory hallucinations which have influenced and guided the thought of poets, dramatists, painters, musicians, scholars, inventors, statesmen, and philosophers.—*R. Ricci* (Rome).

5682. **Claude, H.** *Interprétations de certaines activités dynamiques dans le domaine de la neuropsychiatrie.* (Interpretations of certain dynamic activities in the field of neuropsychiatry.) *Rev. méd. Suisse rom.*, 1939, 59, 65-85.—The interrelations of the different parts of the cerebrum are derived from principles formulated by Hughlings Jackson, who pointed out the characteristic of the cerebral activities observed in neuropsychiatry which we term "dynamic."—*E. Claparède* (Geneva).

5683. **Couvin, W., & Thompson, J. W.** *Treatment of the total organism in schizophrenic patients.* *Amer. J. Psychiat.*, 1939, 95, 1059-1066.—With the growing monistic conception of the individual as a unit of integrated activities which exists in interdependent relations with its environment as well as with its component parts, restitutive efforts must necessarily be directed toward the entire socio-individualistic economy. Treatment in the series of

cases reported consisted of subjecting patients to a number of simple physical stresses, exposure to air mixtures containing a low percentage of oxygen, and psychotherapy. Treatment was found to be physically advantageous. 69% (18) of the patients showed (clinical) improvement varying from slight to marked.—*R. Goldman* (Boston Psychopathic Hospital).

5684. **Crespo, E. P.** El problema actual de la psicogenesis morbida. Su importancia nosologica. La patologia funcional. (The present problem of morbid psychogenesis; its nosologic importance; functional pathology.) *Rev. Neurol. Buenos Aires*, 1938, 2, 421-442.—(*Biol. Abstr.* XIII: 7905).

5685. **Cuatrecasas, J., & Alvarez, O.** El desarrollo sintático en los débiles mentales. (Development of language by the feeble-minded.) *Bol. Inst. psiquiat.*, 1938, 2, 151-167.—Formation of written language habits which characterize different feeble-minded subjects is described by the case study method.—*R. M. Bellows* (Maryland).

5686. **Davidson, H. A.** Neurosis and malingering. *Amer. J. med. Jurisprud.*, 1939, 2, 94-96.—The problem of malingering vs. traumatic neurosis resulting from industrial accidents is important, since failure to detect cases of true malingering places a premium on fraud. The author distinguishes between neurosis precipitated by the trauma and the neurosis which develops coincidentally with the trauma. Ten criteria are suggested for distinguishing cases of neurosis from malingerers. These include such tests as: faithfulness in taking prescribed medicines, willingness to submit to surgical operation and repeated examinations, ability to play compared with ability to work, and evidences of the traumatic experience in the patient's dreams, thinking, and talking.—*A. Chapanis* (Yale).

5687. **Davis, P. A., & Davis, H.** The electroencephalograms of psychotic patients. *Amer. J. Psychiat.*, 1939, 95, 1007-1025.—The fundamental patterns of 232 patients in mental hospitals cannot be distinguished from those of a control series of 500 "normals." "There is, however, a large proportion of patients whose records show variations outside of the normal range of variability. The abnormalities which break into the pattern, rather than the type of pattern itself, constitute the significant difference between the electroencephalograms of these patients and of normal individuals."—*R. Goldman* (Boston Psychopathic Hospital).

5688. **De Jong, H.** Experimental catatonia in a chimpanzee. *Proc. Soc. exp. Biol.*, N. Y., 1939, 41, 395-396.—Bulbocapnine (10-50 mg.) injected intramuscularly in chimpanzees resulted in symptoms of experimental catatonia in one animal like those known to follow administration of average doses of the drug in other animals.—*H. Peak* (Randolph-Macon).

5689. **Denker, P. G.** The prognosis of insured neurotics. *N. Y. St. J. Med.*, 1939, 39, 238-247.—This article is based on 1000 disability insurance claims, with the following conclusions: (1) A follow-

up study of 1000 consecutive disability claims for psychoneurosis was made at least five years after disability had commenced. (2) Almost 30% were found to have been incorrectly diagnosed, the true nature of the illness manifesting itself within one year. (3) A mortality study of the series shows that neurotics have a distinctly greater life expectancy than normals. The rarity of suicide in this group is stressed. (4) The duration of neurosis in relation to disability income, type of therapy, age, sex, and other factors is discussed. (5) The cases settled by lump-sum compromise are analyzed, and this method of terminating neurotic claims is reviewed in the light of the present experience as well as others.—*A. Chapanis* (Yale).

5690. **Deussen, J.** Sexualpathologie. (Sexual pathology.) *Fortschr. Erbp. Rassenhyg.*, 1939, 3, 67-102.—Normal sex psychology and general psychopathology provide the necessary methods for sexual pathology. An important field is the disturbance of the individual's specific sexual psychic characteristics and intention (object choice). Disharmony between body and soul is especially to be considered, but not to be oversimplified unjustifiably in the search for roots of character. The principles of the "elementary," the "individualized," and the "mental" allow a systematic classification of perversions. They are all based on a psychopathic disturbance of the normal psychophysical nature, and can be evaluated from the standpoint of the normal. The idea of pathological disturbances of sexuality should not be limited to perversions.—*P. L. Krieger* (Leipzig).

5691. **Essen-Möller, E.** Die Persönlichkeitsdiagnose nach Sjöbring und ihre Bedeutung für die psychiatrische Erbforschung. (Sjöbring's diagnosis of personality and its significance for psychiatric genetics.) *Allg. Z. Psychiat.*, 1939, 112, 25-31.—Previous symptomatologies of the psychoses begged the question in so far as the psychosis itself was their point of departure. But Sjöbring has revealed the roots of normal mental activity: validity, solidity, stability, and capacity, with all possible variations. To these correspond the asthenic, hysterical, and manic-depressive personalities. Symptoms of varied significance and origin as well as constitutional psychotic trends may thus be better interpreted.—*P. L. Krieger* (Leipzig).

5692. **Eyermann, C. H.** The emotional component of bronchial asthma. *J. Allergy*, 1938, 9, 565-571.—(*Biol. Abstr.* XIII: 7907).

5693. **Fleck, U.** Symptomatische Psychosen (1937). (Symptomatic psychoses, 1937.) *Fortschr. Neurol. Psychiat.*, 1939, 11, 263-275.—The author discusses psychoses associated with a number of organic disturbances such as head injury, tumor, pellagra, brain operation, cardiac disease, and others. He points out that Luxenburger distinguishes symptomatic psychoses from endogenous psychoses on the basis that the symptoms may be the same in both cases but that the foundation is different. Special notice should thus be taken of the factors causing

the psychosis. An encephalitis case presenting the picture of schizophrenia suffers from symptomatic schizophrenia. Recent investigations studying such manifestations are dealt with in brief résumés. Bibliography.—*D. S. Oberlin* (Delaware State Hospital).

5694. Fletcher, P. **Mastering your nerves.** New York: Dutton, 1939. Pp. 241. \$1.50.

5695. Flournoy, H. **Organicité dynamique.** (Dynamic organicity.) *Rev. méd. Suisse rom.*, 1939, 59, 287-305.—Apropos of a case of hysterical coxalgia which was cured by suggestion, the author states that "psychic mechanism" does not mean a mechanism without cerebral disturbance. The case was not one of lesional disturbance but of dynamic disturbance. There was no evidence of an anatomical rupture of nerve elements in the patient, but there was a faulty distribution of energy.—*E. Claparède* (Geneva).

5696. Fromenty, L. **Surmenage intellectuel et schizophrénies.** (Intellectual overwork and schizophrenia.) *Ann. méd.-psychol.*, 1939, 97, Part 1, 755-764.—Several cases are cited of teachers with unintellectual parents who suffered from schizophrenia. The history of a medical student who had several mental disturbances following examinations is given in some detail. The author feels that attempting mental work beyond their capacity was the determining cause of the schizophrenia in these cases.—*M. B. Mitchell* (Psychopathic Hospital, State University of Iowa).

5697. Gallinek, A. **Nondogmatic psychotherapy.** *N. Y. St. J. Med.*, 1939, 39, 665-671.

5698. Geisler, E. **Der Einfluss der Geisteskrankheit eines Gesellschafters auf die Gründung einer Personalgesellschaft.** (The influence of mental disease in one partner upon the organization of a personal partnership.) Köln: Orthen, 1939. Pp. 65.

5699. Gelma, E. **Au sujet du délire.** (On the subject of delusion.) *J. Psychol. norm. path.*, 1938, 35, 287-298.—The usual definition of delusion as an error in perception, imagination, attention, judgment, desire, or will is not sufficient. Delusion must be considered as an end product. It is the coming to a head of a long and complex process. If one hopes to understand and interpret delusion, one must study the steps of the disease and the chain of disturbances of which the delusion is the final link.—*R. E. Perl* (New York City).

5700. Goldkuhl, E. **Psychische Insufficienzzustände bei Oligophrenien leichter Grades.** (Psychical incapacity in mild cases of feeble-mindedness.) Copenhagen: Levin & Munksgaard, 1938. Pp. 411.—The symptomatology and personality analysis of the mentally weak.—*R. C. Givler* (Tufts).

5701. Gordon, R. G. **The psychologic factor in chronic rheumatism.** *Brit. med. J.*, 1939, 1165-1169.—*W. J. Brogden* (Wisconsin).

5702. Grüneberg, R. **Zur kinderpsychiatrischen Anamnese.** (Anamnesis in child psychiatry.) *Ann. paediat.*, 1939, 152, 328-337.—The writer uses

the term "anamnesis" to designate the art of helping a patient to recall facts not immediately present in consciousness. He feels that in child psychiatry every diagnosis must be based upon a systematic anamnesis covering the entire period of development and including "the pathology of the family."—*F. L. Goodenough* (Minnesota).

5703. Gyárfás, K. **Disturbances of drawing in hypoglycemia.** *Confin. neurol.*, 1939, 2, 148-160.—"For the further examination of focal symptoms observed in hypoglycemia patients were made to draw when waking up from the coma. The disturbances of drawing were in cases where perceptual, aphasic, or body-schema disorders prevailed, and of constructive character, analogous to those described by Kleist, Engerth, and Ehrenwald in cases of parieto-occipital lesions. In patients with prevalently motor shocks the drawing showed a regression of infantile character."—*P. L. Krieger* (Leipzig).

5704. Hathaway, S. R. **The personality inventory as an aid in the diagnosis of psychopathic inferiors.** *J. consult. Psychol.*, 1939, 3, 112-117.—Evidence is given to show the value of the Bernreuter personality inventory in diagnosing patients belonging to the general classification of constitutional psychopathic inferiors. These individuals score markedly toward the normal extreme of the neurotic inventory, are anti-social in behavior, and with an absence of emotional response are unable to profit from experience.—*P. S. de Q. Cabot* (Simmons).

5705. Hawke, W. A. **Psychogenic disorders in childhood which simulate organic diseases.** *Canad. med. Ass. J.*, 1939, 40, 457-463.

5706. Hell, K. **Sind frühkindliche Entwicklungsstörungen (verspätetes Laufen- und Sprechenlernen, Bettnässen) verwertbar für die Abgrenzung des exogenen und endogenen Schwachsinn?** (Are developmental disturbances in early childhood (retarded walking and talking, enuresis) useful criteria in discriminating exogenous and endogenous feeble-mindedness?) *Allg. Z. Psychiat.*, 1939, 112, 294-297.—*P. L. Krieger* (Leipzig).

5707. Hinrichsen, O. **Hochbegabung, Erfolg und psychische Krankheit.** (Exceptional endowment, success, and mental illness.) *Psychiat.-neurol. Wschr.*, 1939, 41, 239-242.—*P. L. Krieger* (Leipzig).

5708. Illing, J. **Beiträge zum Krankheitsbild der mongoloiden Idiotie.** (Contribution to the clinical picture of mongolian idiocy.) *Mschr. Kinderheilk.*, 1939, 78, 353-375.—The condition known as mongolism was first named and described by Langdon Down in 1867, but its cause is still unknown. The symptoms are well known and rather easily recognized, hence the likelihood of error in diagnosis is relatively small. The physical signs of mongolism may be grouped under four heads: (1) changes in the skeletal and muscular systems, (2) changes in the skin and mucous membranes and in the distribution of fat, (3) changes in the sense organs, and (4) unclassified anomalies. Various theories of causation are discussed, but it is pointed out that no one of these has been proven. Statistically, the one fact

that holds up in practically all studies is the disproportionately large number of mothers who were nearing the end of the child-bearing period. In the author's own study of 143 mothers whose age at the birth of the mongolian child was known, 58 had passed the age of 40 and only 34 were under 30.—*F. L. Goodenough* (Minnesota).

5709. *Jervis, G. A.* The genetics of phenylpyruvic oligophrenia. *J. ment. Sci.*, 1939, 85, 719-762.—While mental deficiency appears to be greatly influenced by genetic factors, it has not previously been shown to fulfill the Mendelian postulate of a "unit character." Controls have been difficult for many reasons. Finding of phenylpyruvic acid in the urine of mental defectives who also possessed certain relatively similar motor anomalies made possible this genetic study. The phenylpyruvic acid is easily identified and seems to constitute a unity in a biological sense. 23,000 patients (mental defectives) were examined and 161 showed positive reaction. Examination of these patients' families indicated high incidence of the same condition. After statistical study the conclusion is reached that phenylpyruvic oligophrenia appears to be a type of mental deficiency determined by a single autosomal recessive gene.—*D. G. Ryans* (William Woods College).

5710. *Kahn, S.* Psychiatric versus psychoanalytic training. *Med. Rec.*, N. Y., 1939, 150, 59-60.—A brief discussion is given comparing psychiatry, which is defined as essentially descriptive psychology, and psychoanalysis, which is defined as a system of re-education, and the application of both to a specific patient is illustrated.—*M. H. Erickson* (Eloise Hospital).

5711. *Kaminsky, S. D.* [The problem of experimental neurosis. The active adaptation of monkeys to difficult experimental conditions.] *Ark. biol. Nauk*, 1939, 53, No. 2-3, 69-88.—Conditioned food responses by the "free" technique—going to the feeding place—were established in 3 monkeys to a metronome of 120 beats per minute, a bell of medium intensity, a white light, and the sound of the telephone. A differential CR to a metronome of 60 beats was also formed. "Experimental neurosis" was attempted by prolonging the duration of the negative stimulus from 15 seconds to 3-25 minutes, and by alternating rapidly positive and negative stimuli. Dogs have been known to become deeply affected by such procedures and to develop stable "neuroses," but the monkeys were only slightly disturbed even after prolonged experimentation. The differences are explained by the greater plasticity of the monkeys' nervous systems, the relatively slighter prepotency of food in their lives, and their encountering conflicts and difficulties more often. The dogs in "experimental neurosis" are restrained in frames, while the monkeys in the experiment were free to move around.—*G. H. S. Razran* (Columbia).

5712. *Keschner, M.* Forensic neuropsychiatry. *N. Y. St. J. Med.*, 1939, 39, 218-224.—The author points out the meaninglessness of legal conceptions and definitions of aspects of the human personality,

urges the careful selection of psychiatric expert witnesses, and indicates the need for further elaboration and clarification of the factual material in the field of psychiatry.—*A. Chapanis* (Yale).

5713. *Küppers, E.* Die Schockbehandlung des manisch-depressiven Irreseins. (Shock treatment of manic-depressive insanity.) *Allg. Z. Psychiat.*, 1939, 112, 436-455.—*P. L. Krieger* (Leipzig).

5714. *Lagache, D.* Érotomanie et jalousie. (Erotomania and jealousy.) *J. Psychol. norm. path.*, 1938, 35, 127-160.—The author discusses structural relations, genetic relations, psychoanalytical concepts, heterosexuality, familial and social feelings, homosexuality, narcissism, auto-eroticism, predisposition, the role of maternity, and the role of defense mechanisms. Two cases are presented in detail.—*R. E. Perl* (New York City).

5715. *Leonhard, K.* Fragen der Erbbegutachtung bei den atypischen Psychosen. (The case for inheritance of atypical psychoses.) *Allg. Z. Psychiat.*, 1939, 112, 391-396.—The author reviews previous classifications of psychoses, particularly anxiety psychoses, which he examines more closely.—*P. L. Krieger* (Leipzig).

5716. *Löfvendahl, H.* The problem of neurosis. *Acta med. scand.*, 1939, 99, 28-44.—(*Biol. Abstr.* XIII: 7914).

5717. *Maier, N. R. F.* Studies of abnormal behavior in the rat; the neurotic pattern and an analysis of the situation which produces it. New York: Harper, 1939. Pp. 81 + 16 figs. \$2.00.—The bulk of the book consists of detailed case histories of 9 rats which exhibited violently disturbed behavior as a result of being forced to react after all available modes of reaction had been removed. A distinguishing and important feature of the procedure was the use of compressed air to force jumping in a Lashley discrimination situation which had been made self-contradictory. The disturbed pattern, which was very uniform, comprised an active and a passive phase, each of which consisted of several discriminable aspects. A bibliography and summary of previous work are included, as are photographs of the characteristic phases of the behavior.—*R. R. Willoughby* (Brown).

5718. *Malamud, W., & Reuder, N.* Course and prognosis in schizophrenia. *Amer. J. Psychiat.*, 1939, 95, 1039-1057.—Patients definitely diagnosed schizophrenic, admitted and treated in a hospital for a period of 8 years, were re-examined to determine their present status. They were classified as completely recovered, socially recovered, markedly improved, slightly improved, unimproved, and dead. A follow-up period of at least 5 years was found to be essential to obtain reliable results. The factors likely to influence the prognosis favorably and unfavorably are given. Further work is suggested to see if prognostic patterns can be established.—*R. Goldman* (Boston Psychopathic Hospital).

5719. *McIlwaine, W. B.* The correlation between the pediatrician, psychiatrist and psychologist.

Virginia med. Mon., 1939, 66, 96-99.—The gist of this article consists of a plea that when any case comes within the realm of mental or emotional conditions, counsel should be sought from a psychologist or a psychiatrist.—*A. Chapanis* (Yale).

5720. *Meinertz, J.* Psychotherapie—eine Wissenschaft! Untersuchung über den Wissenschaftsstruktur der Grundlagen seelischer Krankenbehandlung. (Psychotherapy—a science! Investigation on the scientific structure of the bases of psychiatric treatment.) Berlin: Springer, 1939. Vol. IV. Pp. 144. RM. 7.80.

5721. *Menninger, W. C.* Psychoanalytic principles in psychiatric hospital therapy. *Sth. med. J.*, 1939, 32, 348-354.

5722. *Menzies, W. F.* Choreoathetosis and infracortical nervous mechanisms. *J. ment. Sci.*, 1939, 85, 763-778.—*D. G. Ryans* (William Woods College).

5723. *Mira, E.* Psychiatric experience in the Spanish war. *Brit. med. J.*, 1939, 1217-1220.—*W. J. Brogden* (Wisconsin).

5724. *Morel, F.* De la méthode en psychiatrie. (Method in psychiatry.) *Rev. méd. Suisse rom.*, 1939, 59, 1-11.—Normal psychology is of little use in psychiatry. Anatomico-clinical methods are of most service, particularly ophthalmoscopy, which represents "the sole means for looking at the living brain, or at least at an extended part of it, and at the beating cerebral arteries."—*E. Claparède* (Geneva).

5725. *Morgan, J. J. B.* Mental health for normal people. *Bull. Kans. ment. Hyg. Soc.*, 1939, 13, 3-7.

5726. *Morselli, E.* Psichiatria e terapia. (Psychiatry and therapy.) *Osped. maggiore Novara*, 1936, No. 10, 456-459.—The governing ideas of all psychiatric therapy should be uniformly based on the unitary and totalitarian concept of human individuality, according to which concept the organism is viewed as acting as a collaborating whole in every instance.—*L. Canestrelli* (Rome).

5727. *Morselli, E.* Il problema delle allucinazioni al Congresso Internazionale di Psicologia. (The problem of hallucinations as discussed at the International Congress of Psychology.) *Riv. sper. Freniat.*, 1938, 62, 241-248.—*R. Ricci* (Rome).

5728. *Muthmann, W.* Zur Psychologie und Prognose der juvenilen Paralyse. (Psychology and prognosis in juvenile paralysis.) *Arch. Kinderheilk.*, 1939, 116, 179-188.—Following a review of the literature on the physical and behavioral symptoms of juvenile paresis, the author presents a detailed account of the psychological examination and observation of a boy of 13 years who was suffering from the congenital form of the disease. An extensive bibliography is appended.—*F. L. Goodenough* (Minnesota).

5729. *Noad, K. B.* Anxiety states in general practice. *Med. J. Aust.*, 1939, 1 (26th year), 294-297.

5730. *Noyes, A. P.* Modern clinical psychiatry. Philadelphia: Saunders, 1939. Pp. 570. \$5.00.—Without altering the essential organization of his

text, the author has added recent observations and conclusions, especially those concerned with personality reactions observed in everyday social contacts and with somatic conditions containing significant mental factors. Pharmaceutical treatments are discussed, and a chapter concerning the psychiatric aspects of general medicine has been added.—*J. McV. Hunt* (Brown).

5731. *Oberndorf, C. P.* On retaining the sense of reality in states of depersonalization. *Int. J. Psycho-Anal.*, 1939, 20, 137-147.—In the author's experience, 4 mechanisms are concerned in depersonalization: (1) parental identifications, where a certain characteristic of one parent is considered to be specific for that parent; (2) erotization of thinking and its excessive cathexis; (3) identification of thinking as a characteristic of the parent of the opposite sex—most often in females; and (4) repression, which develops because of the conflict resulting from the patient's attempt to rid himself of that portion of the super-ego he comes to regard as incongruous or even harmful to his biological role. Discussion is offered of these points in relation to clinical material and examples, and emphasis is placed upon the need for more extensive study of the problem of depersonalization and for the discovery of all of the factors responsible for feelings of unreality, to permit a more adequate therapeutic approach. A 12-item bibliography is appended.—*M. H. Erickson* (Eloise Hospital).

5732. *Ordway, M. D.* A preliminary report of a survey of 100 cases of misuse of alcohol. *Med. Wom. J.*, 1939, 46, 65-72.

5733. *Overholser, W.* Some problems in psychiatric expert testimony. *Amer. J. med. Jurisprud.*, 1939, 2, 76-83.—A brief historical résumé of the relation of the "expert" to the court is presented, with a discussion of current uses of psychiatric testimony in criminal courts and problems arising therefrom. Suggested changes include: (1) Recognition of the unrealistic nature of present legal "tests of insanity," employing such metaphysical concepts as "free will" and "criminal intent," with the substitution of distinctly medical testimony. (2) Automatic and impartial mental examination of prisoners by a psychiatric board. (3) Greater attention to the qualifications of the expert. (4) Automatic commitment for an indeterminate period of prisoners acquitted on a verdict of insanity.—*A. Chapanis* (Yale).

5734. *Penrose, L. S.* Intelligence test scores of mentally defective patients and their relatives. *Brit. J. Psychol.*, 1939, 30, 1-18.—The Stanford-Binet test was given to 682 relatives of mentally defective patients and the Porteus maze test to 481 such relatives. A method of scoring mental ratio was devised which enabled comparison to be made between the abilities of patients, who were mostly adults, and their tested relatives, who were mostly children. The patients and relatives were then classified according to sex, and according to whether their M. R. was above or below 50. It was found

that the relatives of patients with M. R. below 50 had better scores on the whole than those of patients with M. R. above 50. Analysis of the two groups showed that familial cases in the low-grade infertile group were rare, but when they occurred were usually low-grade. The ability of relatives of patients with M. R. 50 or over tends to regress toward the normal, as would be expected if the factors underlying the inheritance of mental ability were multiple additive ones. Certain irregularities in the results can be interpreted as due to the selection of some of the institutional patients from social strata in which mental ability is often subnormal.—*M. D. Vernon* (Cambridge, England).

5735. Pickering, G. W. Experimental observations on headache. *Brit. med. J.*, 1939, 907-912.—*W. J. Brogden* (Wisconsin).

5736. Popenoe, P. The reproduction of mental defectives. *J. Contraception*, 1939, 4, 75-77.

5737. Posnansky, M. Idiotia thymica. (Thymic idiocy.) *Z. Kinderpsychiat.*, 1939, 6, 7-16.—A review of the literature on this syndrome, a discussion of some cases and a consideration of newer experimental investigations on thymic function.—*D. Shallow* (Worcester State Hospital).

5738. Reese, H., Paskind, H., & Sevringhaus, E. The 1938 year book of neurology, psychiatry and endocrinology. Chicago: Year Book Publishers, 1939. Pp. 776. \$3.00.—This edition reviews 520 contributions. In Neurology, by Reese, special emphasis is placed upon the clarifications of functional and biochemical integration phenomena, chemical and nutritional therapeutics, the understanding of disease relation to and surgical alteration of the autonomic nervous system, and the electroencephalogram in analyzing and localizing morbid cerebral conditions. In Psychiatry, by Paskind, particular attention has been paid to the problems of non-specific, non-febrile therapy, and follow-up studies of insulin and metrazol therapy and their extension to various syndromes. In Endocrinology, by Sevringhaus, no outstanding endocrine achievement is reported. Emphasis is placed upon the need for the better application of laboratory methods for diagnosis, for the standardization of preparations, for the development of a standard of weight units for endocrine dosage, and for more careful post-mortem examinations of patients dying following a chronic endocrine problem. Special mention is made of the laboratory discovery by Collip and his associates of a new hormone in the intermediate pituitary lobe, and attention is directed to new therapeutic materials coming into use, particularly dihydrotachysterol and new synthetic estrogenic compounds.—*M. H. Erickson* (Eloise Hospital).

5739. Riedel, H. Wesen, Bedeutung, Ergebnisse und Aufgaben der erbbiologischen Forschung an abnormen Persönlichkeiten. (The nature, significance, findings, and objectives of genetic investigation of abnormal personalities.) *Allg. Z. Psychiat.*, 1939, 112, 200-223.—In abnormal personalities heredity plays a decisive part. But there is as yet no

certain proof of the inheritance of psychopathological syndromes. Much further study of particular psychopaths is needed. The author looks to further specific clinical reference of phenotypes to genotypes and pure physical and mental phenomena. The dispute with non-medical psychology is needless.—*P. L. Krieger* (Leipzig).

5740. Roberti, C. E., & Heymann, H. Delle allucinazioni. Parte IV. Allucinazione e sistema neuro-vegetativo. (Hallucinations. Part IV. Hallucinations and the neuro-vegetative system.) *Rass. Stud. psichiat.*, 1937, 26, 245-276.—*L. Canestrelli* (Rome).

5741. Robinson, G. W., Jr. Acute confusional states of old age; their interpretation and treatment. *Sth. med. J.*, 1939, 32, 479-486.

5742. Rosanoff, A. J., Handy, L. A., & Plesset, I. R. Mental disorders in triplets. *Amer. J. Psychiat.*, 1939, 95, 1139-1142.—"Twelve sets of triplets, comprising thirty-three surviving and three stillborn individuals, were incidentally included, along with over a thousand pairs of twins, collected for the purpose of a study of the etiology of mental disorders. The twins and triplets were selected on the basis of at least one in each pair or set having a mental disorder. Neuropsychiatric conditions were found affecting seventeen of the thirty-three subjects, consisting of subnormal intelligence with or without the following complications: child behavior difficulties, juvenile delinquency, adult criminality, psychotic disease, and epilepsy." Though the material is limited, the findings serve "not only to confirm the conclusions reached by us from our . . . studies of twins, but also to further discount the factor of heredity in the etiology of the conditions under consideration. The neuropsychiatric conditions found were all of types which are often seen as residuals or sequels of cerebral birth trauma."—*R. Goldman* (Boston Psychopathic Hospital).

5743. Ross, M. Mental retardation associated with congenital heart disease; a study of twenty-two cases. *J. Pediat.*, 1939, 14, 21-24.—(*Child Development. Abstr.* XIII: 630).

5744. Sager, O., & Kreindler, A. Etudes électro-encéphalographiques dans l'épilepsie. (Electroencephalographic studies in epilepsy.) *J. belge Neurol. Psychiat.*, 1939, 39, 265-275.—The authors compared the electro-encephalograms of several patients taken during epileptic attacks with those of animals during experimentally produced convulsions. A number of the records are reproduced. In their opinion the tracings obtained point to subcortical factors in the causation of epileptic attacks.—*H. Syz* (Cornell).

5745. Salmon, A. L'insonnia. (Insomnia.) *Rif. med.*, 1936, No. 41, 1378-1385.—*L. Canestrelli* (Rome).

5746. Schilder, P. The treatment of depersonalization. *Bull. N. Y. Acad. Med.*, 1939, 15, 258-272.

5747. Schneider, K. Begriffliche Untersuchung über den Zwang. (Investigation of the concept of

compulsion.) *Allg. Z. Psychiat.*, 1939, 112, 17-24.—Westphal's definition does not cover numerous compulsive ideas, seizures, feelings, impulses, actions, and inertias. As to content, mental compulsion always involves the self. Compulsion is a mode of experience not closely definable but characterized by its intensity factor. This emerges as a typical trend, which like all types shades off on all sides.—P. L. Krieger (Leipzig).

5748. Schultz-Henke, H. *Über Organneurosen.* (Organ neuroses.) *Dtsch. med. Wschr.*, 1938, 64, 1794-1797.—Real relationships may exist between certain organs and certain emotions, e.g. fear and the lungs. Symptoms of organ neuroses are not selected merely on the basis of a willingness to have these organs fail but also in view of certain functional, highly individual connections.—P. L. Krieger (Leipzig).

5749. Schweingruber, E. *Grundregeln der seelischen Gesundheitspflege.* (Basic rules of mental hygiene.) (2nd ed.) Zürich, Leipzig: Gothelf-Verl., 1939. Pp. 15. Fr. -30.

5750. Sherman, I. C. *Psychoses in children.* *Ill. med. J.*, 1939, 75, 446-450.

5751. Silkworth, W. D. *Psychological rehabilitation of alcoholics.* *Med. Rec.*, N. Y., 1939, 150, 65-66.—A brief general discussion is given of alcoholism, emphasizing that the majority of alcoholic patients object helplessly to their condition and that moderate drinking is an impossible goal for them. Therapy should be based upon the re-establishment of self-confidence and "some form of moral psychology."—M. H. Erickson (Eloise Hospital).

5752. Southwick, W. E. *Sterilization policy, economic expediency and fundamental inheritance, with special reference to the inheritance of the intelligence quotient.* *J. ment. Sci.*, 1939, 85, 707-718.—Since a sterilization policy should be based upon a clear-cut demonstration that the germ plasm of the sterilized is distinctly deleterious to the welfare of society, this study of 488 children of institutionalized parents was undertaken in an effort to estimate the extent to which low intelligence quotients were determined by hereditary factors. Intelligence quotients were available for 138 children and 72 parents. The curves show a smooth normal distribution in both cases, the mode of the parents being represented by an IQ of 55 and that of the children by one of 65. It is concluded that the IQ has a genetic basis and that the genes which produce low IQ's are definitely deleterious to the welfare of society.—D. E. Ryans (William Woods College).

5753. Stokvis, B. *Die Autohypnose als psychotherapeutisches Hilfsmittel.* (Autohypnosis as a psychotherapeutic measure.) *Mschr. Psychiat. Neurol.*, 1939, 101, 4-7.—"The author is of the opinion that the continuation factor in therapy, especially in therapeutic hypnosis, has a great value. In this respect he mentions autohypnosis as a valuable expedient in hypnotherapy."—P. L. Krieger (Leipzig).

5754. Strauss, A., & Werner, H. *Finger agnosia in children; with a brief discussion on defect and retardation in mentally handicapped children.* *Amer. J. Psychiat.*, 1939, 95, 1215-1225.—"Finger agnosia is the inability to recognize, indicate on request, name or choose fingers of one's own hands or the hands of others." A history of the problem, a case presentation, and a theoretical discussion are given.—R. Goldman (Boston Psychopathic Hospital).

5755. Tobler, W. *Zur Ätiologie der mongoloiden Idiotie.* (The etiology of mongolian idiocy.) *Mschr. Kinderheilk.*, 1938, 76, 62-71.—Describes a case of identical mongolian twins, aged 8 months. This is the 14th instance of the kind recorded in the medical literature. Data are presented on family history, birth history, and the clinical items by which the diagnoses of monozygosity and mongolism were made.—F. L. Goodenough (Minnesota).

5756. Tumiati, C. *L'igiene mentale nell' educazione familiare.* (Mental hygiene in family education.) *Atti Lega ital. Igiene*, 1937, 37-44.—The author views mental hygiene as a part of psychiatry. Therefore he believes that the psychohygienist should look for mistakes in home education which might determine or lead to morbid variations which are not characteristic of simple deficiencies reconcilable with the well-being of the child's psyche. Pedagogy is the only means for modifying these deficiencies. The author also deals with certain conditions in family life which may injure the mental health of the children, such as the presence in the family of neuropsychopathic relatives, the lack or the excess of rigorous control or the presence of negligence on the part of the parents, and the existence of predispositions in children who have not yet been fully trained. The task of mental hygiene with respect to family education consists chiefly in a demonstration of the existing dangers, in the opportune revelation of predispositions, and in supplying the child with proper methods for healthy psychological and physiological preservation.—R. Ricci (Rome).

5757. Usievich, M. A., & Schmulevich, M. G. *[A peculiar disturbance of higher nervous activity cured by bromide.] Fiziol. Zh. S. S. S. R.*, 1937, 23, 697-701.—A case of disturbed higher nervous activity in a dog, caused by the experimental use of an excessive number of inhibitory stimuli, was cured by daily administration of 0.5 gm. of NaBr.—(Courtesy *J. ment. Sci.*).

5758. Van Wulfften Palthe, P. M. *Il significato forense del "Koro."* (The legal significance of "koro.") *Arch. antrop. crim., Suppl.*, 1937, 57, 173-182.—The imaginal malady called *ko.o*, which affects the natives of the Dutch Indies, is of legal importance, since it has been found to be the result of very strong emotions and anxieties which arise from the same field of consciousness from which come the aggressive and homicidal impulses called *amok*.—L. Canestrelli (Rome).

5759. Victoria, M. *Un problema semiologico: apraxia y agrafia.* (A semeiological problem:

apraxia and agraphia.) *Rev. Neurol. Buenos Aires*, 1938, 3, 93-100.—(*Biol. Abstr.* XIII: 7918).

5760. Vurpas, C., & Fabre, G. Récidive d'hallucinations après une hémorragie. Conservation de la conscience. (Repeated hallucinations after a hemorrhage. Preservation of consciousness.) *J. Psychol. norm. path.*, 1938, 35, 300-308.—This is a detailed case history of a woman with endocrine, cardio-vascular, and blood disturbances accompanied by severe visual hallucinations.—*R. E. Perl* (New York City).

[See also abstracts 5467, 5500, 5503, 5505, 5510, 5548, 5575, 5604, 5605, 5660, 5770, 5780, 5783, 5791, 5796, 5797, 5848, 5854, 5869, 5873, 5874, 5886, 5908, 5953, 5959, 5960, 5964, 5971.]

PERSONALITY AND CHARACTER

5761. Allers, R. *Psychology of character*. (Trans. by E. B. Strauss.) London, New York: Sheed & Ward, 1939. Pp. 383. \$1.00.—A reprint of the English edition of 1930. The development of character is discussed at length, while adult character is touched upon only incidentally. An attempt is made to reconcile certain ideas of modern psychology, especially of the Adlerian type, with the principles of Thomistic philosophy. The analysis of character starts with a study of action and will. One chapter is devoted to the operation of example. The characterology of the sexes and of adolescence is treated to some extent, as are abnormal and neurotic characters. The concluding chapter deals with self-knowledge and self-culture. Much stress is laid on the necessity of individual analysis and the varying signification of the "same" feature in various individuals and situations. The intention is essentially practical, though the attempt is made to supply some theoretical foundation.—*R. Allers*.

5762. Alten, E. H. The psychology of handwriting and its importance to the physician. *Med. Rec.*, N. Y., 1939, 150, 71-74.—"Handwriting, basically to be understood as a sum of 'crystallized gestures' (micro-gestures), represents a many-sided index of underlying expressive impulses due to the central nervous system. The form of the letters, their relative size, the manner of connecting them, the slope of the script, the slant of the lines, pressure of pen, division of space, these and many other details, never identical in two different original scripts, are, in short classification, criteria of the writer's taste, sense of space, temperament, clearness of thinking, etc., substantial realizations of psychic dominants." Developing these points, the author quotes from studies in the literature, particularly those of Allport, Erlenmeyer, Scholz, Meyer, Klages, Saudek, Downey, and others. He believes that handwriting registers character variations precisely, that it permits a conscious realization of unconscious processes, and that, by handwriting re-education, there is an opportunity to bring into the conscious awareness underlying psychological forces. An 18-item bibliography is appended.—*M. H. Erickson* (Eloise Hospital).

5763. Brigden, R. L. The Cowan adolescent personality schedule: its function in psychological diagnosis. *Amer. J. med. Jurisprud.*, 1939, 2, 97-99.—The adolescent personality schedule is described as being suited to test for maladjustments of the following kinds: fear of people or situations, emotional maladjustment to parents or siblings, maladjustment to family authority, inferiorities and insecurities, maladjustment to responsibility, tendencies to escape from difficulties rather than face them, neurotic symptoms and compensations, and maladjustment to authority as represented by the school, church, law, and government. The schedule was validated against data from conferences, case histories, and other tests. Its function is to help professional people study children's adjustment problems by simplifying personality analysis and furnishing a norm with which to compare the individual.—*A. Chapanis* (Yale).

5764. Burt, C. The factorial analysis of emotional traits. Part II. *Character & Pers.*, 1939, 7, 285-299.—In previous studies it has been shown that emotionality (*e*) is a general factor analogous to *g*. But there has been evidence that there are certain subsidiary factors of a more specific nature. Recent reports bear out this inference. These factors are polarized. The first bipolar factor includes the aggressive and the inhibitive emotions; the second includes the pleasurable and the unpleasurable. On the basis of emotional factors revealed, four temperamental types have been distinguished, the stable and the unstable introvert and the stable and the unstable extravert. Investigations are under way to determine whether there are specific factors to be identified with McDougall's primary instincts.—*M. O. Wilson* (Oklahoma).

5765. Chiarà, M. Il sogno come elemento diagnostico del tipo caratterologico. (The dream as a diagnostic element in characterological typology.) *Arch. gen. Neurol. Psychiat.*, 1938, 19, 5-45.—It was found that, through a study of the dreams of certain subjects whose general behavior was well known, peculiarities of their character were revealed and the processes of their character formation could be determined. By this same method certain aptitudes found in their waking state could be explained, which otherwise seemed out of character. Conclusions drawn from the dreams may have no absolute value, but they are useful in studying characterology and may suggest useful methods for character education.—*R. Ricci* (Rome).

5766. Del Greco, F. Le "confessioni" e le "autobiografie" nel giro delle mentalità comuni ed anormali. ("Confessions" and "autobiographies" in normal and abnormal subjects.) *Ann. Osp. psychiat. Perugia*, 1936, No. 3-4, 119-131.—The author discusses the moments in the life of the ordinary man at which he is likely to write confessions, and compares similar periods in the life of abnormal individuals. He also examines critically the subject of autobiographies, which seem to cover a wider field than do confessions and deal more with events outside the individual.—*L. Canestrelli* (Rome).

5767. Drake, M. J., Roslow, S., & Bennett, G. K. The relationship of self-rating and classmate rating on personality traits. *J. exp. Educ.*, 1939, 7, 210-213.—A comparison was made between scores on each scale of the Link inventory of activities and interests and classmate ratings on questions designed to express the central aspect of each trait. 55 boys and 43 girls served as subjects for both ratings and questionnaire. The consistency of composite ratings by classmates ranged from .79 to .95. The correlation between self-rating by means of the inventory and the rating of classmates for four of the five traits ranged between .49 and .67 for boys and between .38 and .57 for girls. The fifth trait, economic self-determination, was less closely related to classmates' opinion for both sexes. This result is believed to be a function of the lack of extra-school association among the subjects.—H. W. Karn (Pittsburgh).

5768. Dudycha, G. J. The dependability of college students. *J. soc. Psychol.*, 1939, 10, 233-245.—Dependability was measured by promptness in returning books to the library, meeting appointments, coming to an 8-o'clock class, handing in assignments, etc. Library dependability was not found to be closely related to other forms of dependability, except that of handing in assignments. Library dependability was found to be significantly related to intelligence and grades, but to be without relation to scores on the Bernreuter questionnaire. There were no significant sex or class differences.—G. Brighthouse (Occidental).

5769. Emme, E. E. Personality adjustment patterns basic to personnel procedures. *Soc. Science*, 1939, 14, 134-143.

5770. Evlachow, A. Léonard de Vinci n'était-il pas un épileptoïde? (Was Leonardo da Vinci an epileptoid?) *Arch. gen. Neurol. Psychiat.*, 1937, 18, 343-357.—The author compares the constitutional psychological peculiarities of Leonardo with the characteristics of his somatic constitution and his athleticism, and concludes that Leonardo was probably an epileptoid.—R. Ricci (Rome).

5771. Favilli, M. Formazione e costituzione della personalità. (Formation and constitution of the personality.) *Riv. pedagog.*, 1937, 29, No. 5; 30, No. 3.—Favilli first considers, in the very young infant, the formation of the personality; this formation he regards as being relatively retarded. Its beginnings rest in an imitation of others, an identification with certain models, leading to a consciousness of this identification. From this stage the personality frees itself, and, forced by the resistances which occur in the environment, delimits itself. But the personality constitutes itself most fully by a process of synthesis, an important step being realized when the requirement for action is met with, when the acts are ruled by expectation and a prevision of the consequences, not only by simple seeking for the agreeable and flight from the painful.—(Courtesy *Année psychol.*).

5772. Hayes, S. P. The psychology of blindness. In Lende, H., *What of the blind?* New York: American Foundation for the Blind, 1938. Pp. 89-102.—This chapter contains a review and discussion of scientific findings in regard to the psychology of the blind. A section on the sensory life of the blind contains evidence that the superior acuteness of the other senses in blind individuals is the result of a special effort for compensation. Theories regarding the so-called "facial vision," the remarkable ability to avoid obstacles, are critically discussed. A second section reviews the experimental evidence concerning the memory of blind people, and a final section considers the results of testing intelligence in blind children. A bibliography of 6 titles is appended.—R. M. Gagné (Brown).

5773. Heyde, J. E. Das Wesen des Charakters. (The nature of character.) Langensalza: Beyer, 1939. Pp. 26. RM. 70.

5774. Horney, K. Can you take a stand? *J. Adult Educ.*, 1939, 11, 129-132.

5775. Lombardi, M. M. The inter-trait rating technique. *Teach. Coll. Contrib. Educ.*, 1938, No. 760. Pp. 99.—The evolution of the inter-trait rating scale is described. Any one trait among the 50 on the scale is selected by the judge as the calibrator. The other 49 traits are then judged as more or less conspicuous than the one chosen as the calibrator, and in making each judgment the judge indicates the "per cent of certainty" of his judgment. The scale was used with one group of subjects each of whom asked a friend to rate him (1) in the regular way, immediately thereafter (2) using co-operation as the calibrator, and (3) again after three weeks as in (1), and immediately thereafter on another type of rating scale. 183 school teachers rated acquaintances they judged as good and bad. Four methods of obtaining a total score were found to be about equally good. The reliability of the scale is reported as .82, the validity .48. The bibliography lists 85 titles.—J. M. Stalnaker (Princeton).

5776. Loosli-Usteri, M. Le diagnostic individuel chez l'enfant au moyen du test de Rorschach. (Individual diagnosis of the child by means of the Rorschach test.) Paris: Hermann, 1937. Pp. 92. Fr. 25.—This handbook furnishes a guide for the application of the test, for the technique of administering it, and for its interpretation, giving a list of interpretations to facilitate a classification in which the risks of variability of judgment are great. Data on 63 Genevan schoolboys and 63 schoolgirls are presented; they are compared with a group of 107 problem boys examined at the Rousseau Institute. These data give a concrete base (completed by the researches of Mme. Suarès on the constancy of the results obtained on 42 boys and girls who were twice examined, with intervals of from 2 to 5 years) for the general evaluation of the validity of the test, which is contained in a later chapter on interpretation. The author concludes that the test, applicable from age 9 onwards, gives information on intelligence and particularly on affectivity; conclusions should

be based on the relative scores of children of the same age and sex, not on isolated cases.—(Courtesy *Année psychol.*).

5777. Lorge, I. The Thurstone attitude scales; II. The reliability and consistency of younger and older intellectual peers. *J. soc. Psychol.*, 1939, 10, 199-208.—In this study two groups of individuals, one aged 20-25, the other aged 40 or over, and matched on CAVD, were given 2 forms of each of 15 of the Thurstone attitude scales. The scales were scored by 4 methods: median check; mean check; median cross; and mean cross. On each of the 4, the older group gave higher reliability, and the social attitudes of the older group were more consistent throughout. This supports the view that the older adults have adopted a generalized social matrix as a frame of reference for social attitude judgments.—*G. Brighouse* (Occidental).

5778. Meertens, P. J., & Vries, A. de. [Eds.] *De Nederlandsche volkskarakters*. (The character traits of Netherlands people.) Kampen: Kok, 1938. Pp. 550. Gld. 12.75.—31 collaborators chosen from all walks of life contributed characterological descriptions of the groups to which they belonged. Special emphasis was placed on the reactions of each group to its geographical, historical, and social environment. No attempt was made to evaluate these studies scientifically; they range in type from anecdotal to statistical.—*H. Beaumont* (Kentucky).

5779. Messick, J. D. *Personality and character development*. New York: Revell, 1939. Pp. 192. \$1.50.—Topics discussed are: principles of character education; psychology of personality; the correction of children's faults; the influence of home and school in character education; leisure and character; the role of play, physical education, and the community in character development; and practical plans for building character.—*P. S. de Q. Cabot* (Simmons).

5780. Piotrowski, Z. A Rorschach blind analysis of a compulsive neurotic. *Kwart. psychol.*, 1939, 11, 231-264.—The Rorschach record, tabulation, and inquiry are presented of a male patient with CA 28, diagnosed as a severe psychoneurotic. The author makes a blind analysis of this record, without knowing the subject or having any information about him. The analysis includes a description of the personality and explanation of the means by which conclusions are reached. The clinical record is given at the end.—*T. M. Abel* (New York City).

5781. Révész, B. *Típi pszichici*. (Psychological types.) *Arch. gen. Neurol. Psychiat.*, 1938, 19, 269-275.—Basing his conclusions on current scientific information on biopsychotypology and on his own experiences, Révész proposes the following classification of eleven psychological types: manoids, melancholoids, hysteroids, imbeciloids, cyclics, equilibrates, irritables, paranoids, hypochondroids, autistoids, and neurasthenoids. In reply to the criticism that he has based his psychiatric classification of mental disorder types on normal psychological types (thus making a false presupposition), Révész declares that it is only through a study of the char-

acteristics of men who are judged absolutely sane that we can individualize particular emotional or intellectual inclinations. These inclinations furnish the bases for the above classification. When these inclinations reach a stage of exaggeration whereby the subjects are rendered dangerous or antisocial, they become true psychoses, which are currently described under a great number of clinical groups.—*R. Ricci* (Rome).

5782. Richmond, W. V. *La personalità. Studio ed igiene*. (Personality: attainments and hygiene.) Milan: V. Bompiani, 1937. Pp. 355. L. 14.—A translation (see XI: 1850). The subject of personality is covered under the following headings: history, methods of studying personality, the fundamental physio-psychological substrata (the body or soma, the brain and thought, intelligence, emotion, energy, and orientation), habit and the conditioned reflex, the dynamics of personality, the anomalies of the psychic personality (deviations, anomalies, and less important morbid conditions), psychosis and neurosis, and therapy of personality abnormalities.—*R. Ricci* (Rome).

5783. Roback, A. A. *Varför hämmar jag mig själv?* (Self-consciousness self-treated.) (Trans. by Å. Malmström.) Stockholm: Bokförlaget Natur och Kultur, 1939. Pp. 159. \$1.35.

5784. Ryans, D. G. A note on variations in "persistence" test score with sex, age, and academic level. *J. soc. Psychol.*, 1939, 10, 259-264.—This is a further report on a "persistence" test previously reported (Ryans, D. G., An experimental attempt to analyze persistent behavior, *J. gen. Psychol.*, 1938, 19, 333-353; 355-371). No statistically reliable sex or age differences were found. In general, junior-college students were more persistent than the high-school sample.—*G. Brighouse* (Occidental).

5785. St. Clair, W. F. The relation of scholastic aptitude to "withdrawal" personality. *J. educ. Psychol.*, 1939, 30, 295-302.—Variables obtained from the Bernreuter personality inventory and Thurstone psychological examination were obtained from 688 Temple University freshmen. The conclusion of previous investigations, that there is no linear relationship between personality traits and scholastic aptitude, was substantiated. (B1-N was found to correlate .94 with B3-I.) A correlation of .29 was found to exist between scholastic aptitude and self-sufficiency when neurotic tendency and dominance were held constant. Two profiles were defined as follows: Profile I (indicative of 'withdrawal'): B1-N, above 70; B4-D, below 30; B2-S, more than 15 points higher than B4-D. Profile II: B1-N, more than 70; B2-S, less than 30; B4-D, less than 30. "The biserial correlation between samples of Profile I and Profile II resulted in a definite relation between Profile I and scholastic aptitude" ($r = .40$, 10 times its probable error).—*R. M. Bellows* (Maryland).

5786. Steinitz, E. *La recherche expérimentale d'après le questionnaire du Dr. Vermeulen*. (Experimental research with the questionnaire of Dr.

Vermeulen.) *Arch. belges Sci. Educ.*, 1936, 2, 115-126.—Character is defined by Vermeulen as the manner in which the individual asserts himself in his environment; on the basis of this a series of questionnaires has been constructed permitting the establishment of 6 fundamental types, forming two groups of opposite "vitalities," whose terms are respectively a mean and two extremes. The responses gathered by means of these questionnaires permit the placing of each child in a "characterological area." The questionnaires are filled in by the parents, the teacher, and the children, and contain three sorts of tests: (1) The child is required to trace on a paper little lines for one minute; these are to be traced as quickly as possible. (2) He is required to open Decroly box number 2. (3) An unrestricted conversation completes the work. The author gives a pattern of concentric circles permitting the graphical schematization of the character of the child.—(Courtesy *Année psychol.*).

5787. Thomas, F. C. Intuition or psychometry in the study of personality? *Character & Pers.*, 1939, 7, 309-317.—The author strongly supports the view of Cattell (see XII: 2661) favoring psychometry as against that of Vernon (see XII: 2665) favoring intuition as an approach to the study of personality. He also gives several suggestions for the improvement of the psychometric technique. It should include improvement in factorial analysis of basic traits; extension of application of factorial techniques; and a better formulation of the principles basic to the relationship between fundamental traits in normal and in abnormal personalities.—*M. O. Wilson* (Oklahoma).

5788. Walton, R. D. Individual differences in amplitudes of oscillation and their connection with steadiness of character. *Brit. J. Psychol.*, 1939, 30, 36-46.—It has been shown that a common factor other than *g* is present in the tests given and the estimates obtained for steadiness of character, and that this group factor is most closely identified with the mean score for amplitude of oscillation. It is significantly and negatively correlated with estimates of steadiness of character, and is independent of IQ. For the age range of subjects used (11½-16½ years) this group factor shows a significant decrease with age and also with mental age; but its presence is still evident when the effect of age has been eliminated from the intercorrelations.—*M. D. Vernon* (Cambridge, England).

5789. Wells, G. R. The art of being a person. New York: Appleton-Century, 1939. Pp. vii + 300. \$2.50.—The author regards the solution of personal problems as an artistic process. Metaphysical discussions of free will and determinism are avoided as irrelevant to a consideration of the development of self-control. Happiness and contentment are purposeful constructive achievements and not accidental happenings. Chapter headings include the following: the pattern of personality; the urges to activity; fear, anger, grief, and fatigue; marriage; parents and children; defensive dynamisms; life in

collapse; the constructive point of view.—*P. S. de Q. Cabot* (Simmons).

[See also abstracts 5455, 5654, 5670, 5679, 5691, 5704, 5739, 5813, 5843, 5845, 5850, 5880, 5883, 5890, 5949, 5959, 5973.]

GENERAL SOCIAL PROCESSES

(incl. Esthetics)

5790. Abel, T. M. Social facilitation in different motor tasks. *Kwart. psychol.*, 1939, 11, 162-169.—The relative influence of social facilitation on a simple motor task at two levels of subnormal intelligence was studied. The subjects, 30 at each level, worked either alone or in pairs. When working in pairs, the partners performed different tasks, not the same task as had been done in an earlier experiment. Under these new conditions no positive effect of social facilitation was revealed. In fact, in the more intelligent group, working in pairs on different tasks had a negative effect—performance was better when working alone.—*T. M. Abel* (New York City).

5791. Aginsky, B. W. Psychopathic trends in culture. *Character & Pers.*, 1937, 7, 331-343.—We need a complete description of a large number of cultures in order to determine what is pathological and what is normal. Normality within the group in question means adopting the traditional modes of behavior. Abnormality means failure to participate at all or participation at the wrong time. Cultural patterns of the Pomo Indians of California are used to support the thesis that a culture must be studied from the standpoint of all factors concerned, institutional as well as physical. Ruth Benedict's categories for classifying culture are criticized (see XIII: 5796).—*M. O. Wilson* (Oklahoma).

5792. Anderson, E. E. The effect of the presence of a second animal upon emotional behavior in the male albino rat. *J. soc. Psychol.*, 1939, 10, 265-268.—Animals were placed in novel situations, both singly and in pairs. Emotional behavior was measured by counting and weighing the fecal boluses evacuated during 4-minute test periods. No significant differences were found between animals tested singly and in groups.—*G. Brighthouse* (Occidental).

5793. Baumann, H. Afrikanische Wild- und Buschgeister. (African animal and bush spirits.) *Z. Ethnol.*, 1938, 70, 208-239.—The majority of concepts in the spirit complex of African mythology are based on the hunting experiences of more primitive tribes, and influence the religion even of those cultural groups which no longer consist predominantly of hunters.—*P. L. Krieger* (Leipzig).

5794. Bean, K. L. Reading music instead of spelling it. *J. Musicol.*, 1939, 1, 1-5.—This article reviews several studies which are concerned with the problem of reading music. A plea is made for (1) more attention to groupings or patterns (flash cards will aid here) and (2) development of mental hearing.—*P. R. Farnsworth* (Stanford).

5795. Beck, R. Schwebendes Volkstum im Gesinnungswandel. (Change of sentiment in float-

ing populations.) Stuttgart: Kohlhammer, 1938. Pp. 76. RM 3.60.—Beck goes very concretely into the psychic presuppositions and inner dynamics of transformation of attitude which work themselves out in the change of nationality in mixed, transitional and boundary zones.—*P. L. Krieger* (Leipzig).

5796. **Benedict, R.** A reply to Dr. Aginsky. *Character & Pers.*, 1939, 7, 344-345.—Aginsky (see XIII: 5791) uses Benedict's concept of cultural categories in too narrow a sense. Furthermore, the uses of the specific categories Apollonian and Dionysian, proposed by her, are erroneous.—*M. O. Wilson* (Oklahoma).

5797. **Berendes, J.** Spastische Dysphonie. (Spastic dysphonia.) *Arch. ges. Phonet.*, 1939, 3, Abt. 2, 29-45; 86-107.—Spastic dysphonia is a speech disturbance characterized by difficulty in giving voice. It resembles stuttering and reveals similar disturbances of breathing. It is a neurotic symptom, usually resulting from protracted bodily or mental illness. Treatment should not be restricted to speech physiology. Professional speaking affects merely the selection of the organ involved and is not really the cause. The prognosis is not so poor as has often been supposed.—*P. L. Krieger* (Leipzig).

5798. **Biró, D.** Die Lorenzsche Generationstheorie in moderner Beleuchtung. (Lorenz's theory of generations in modern light.) *Z. Rassenk.*, 1939, 9, 149-156.—Calculating 3×3 generations, and allowing a deviation of 10-15 years, Lorenz arrives at the theory of a complete wave phase of about 360 years. This is a general biological amplitude, after the course of which the composition of a people repeats itself in regard to its hereditary and characterological qualities, while the greatest variations in the interval occur at 180 years. This conclusion is verified for the 6000-7000 years of the historical era in every European, Asiatic and American people, but not in peoples of mixed races. In the latter, this periodicity appears with greater, apparently incalculable displacement of phases.—*P. L. Krieger* (Leipzig).

5799. **Blachowski, S.** Good luck letters. *Kwart. Psychol.*, 1939, 11, 170-188.—The author discusses the motivations of sending good luck letters and the extent to which the magical implications of these chain letters are believed. To obtain specific information, questionnaires were given to 124 university students in 1931, who had served in an earlier investigation of the magical behavior of youth in school, and to an additional 49 subjects in 1937. The subjects were divided into types depending on their attitudes and overt behavior toward good luck letters received.—*T. M. Abel* (New York City).

5800. **Blaustein, L.** Étude sur la perception des pièces radiophoniques. (A study of the perception of radio dramatic sketches.) *Kwart. psychol.*, 1939, 11, 105-160.—Dramatic sketches on the radio are discussed from the psychological and esthetic points of view as influencing comprehension through auditory cues, imagination, and appreciation.—*T. M. Abel* (New York City).

5801. **Broendal, V.** Les oppositions linguistiques. (Linguistic oppositions.) *J. Psychol. norm. path.*, 1938, 35, 161-170.—The author discusses linguistic problems such as: (1) Is it permissible to apply the structuralism of phonology to found a general theory of morphological structure? (2) May one apply in phonetics the principles of phonology and in syntax those of morphology? (3) What are the fundamental and necessary categories of language? (4) Is there a connection between the particular and the genus relationships? (5) Are linguistic oppositions subject to certain rules, and are these rules equally applicable in all branches of the subject matter?—*R. E. Perl* (New York City).

5802. **Brown, F. J.** [Ed.] Refugees. *Ann. Amer. Acad. polit. soc. Sci.*, 1939, 203.—This volume is devoted to "showing the causes, the facts, the administrative and economic difficulties, the human adjustments, and the efforts at solution, of forced migration." 22 special articles deal with aspects of these questions under the general headings: Underlying Factors of the Refugee Problem, The Present Problem, The Human Side of the Problem, and Possible Ways Out. The editor appends an annotated bibliography on the refugee problem.—*L. J. Stone* (Vassar).

5803. **Brown, W. O.** Race prejudice as a factor in the status of the American negro. *J. Negro Educ.*, 1939, 7, 349-359.—Race prejudice, defined "as a socially acquired tendency to react with varying degrees of aversion to members of a group identified as a race," is a by-product and result of the negro's subordination. It became a device by which slave owners controlled the negro and the rural poor expressed their resentment at his intrusion. It has been perpetuated because it serves the white man economically and protects his social security, prestige and power.—*W. E. Walton* (Nebraska).

5804. **Brugger, C.** Die Landflucht der Begabten. (The emigration of the gifted from rural areas.) *Allg. Z. Psychiat.*, 1939, 112, 337-348.—In four districts in Aargau less gifted males emigrate to villages more often than to cities, while to a limited extent emigrants to the cities constitute a positive selection in ability. This result, which is in contrast to those of similar German studies, may be explained by the facts that in Switzerland there is no such distinct antagonism between city and country, that the Swiss cities are not predominantly cosmopolitan in character, and that home industries are widely distributed in rural areas. A definite selective factor is noticeable only among emigrants abroad, and even here is found in males only.—*P. L. Krieger* (Leipzig).

5805. **Chapin, F. S.** Social participation and social intelligence. *Amer. sociol. Rev.*, 1939, 4, 157-166.—A number of coordinated studies are summarized in this article. Among the results are the following: (1) social intelligence, as measured by the George Washington University social intelligence test, is positively related to the number of groups in which university students participate; (2)

"a Social Participation Scale has been constructed which has good reliability and good validity"; (3) scores on this scale are significantly related to various conditions of community and personal adjustment; (4) the author and his associates are doing preliminary work toward constructing a scale for social insight.—*I. L. Child* (Harvard).

5806. Chastaing, M. *Roman policier et psychologie de la vérité.* (Detective novels and the psychology of truth.) *J. Psychol. norm. path.*, 1938, 35, 210-230.—The psychology of the solution of murder mysteries in fiction is discussed in terms of examples drawn from the work of S. S. Van Dine, Conan Doyle, Agatha Christie, F. W. Crofts, Ellery Queen, etc.—*R. E. Perl* (New York City).

5807. Cheyney, E. P. [Ed.] *Freedom of inquiry and expression.* *Ann. Amer. Acad. polit. soc. Sci.*, 1938, 200.—15 articles by experts in various fields discuss restraints upon research and freedom of expression in various fields, such as medicine, literature, the press, and the schools; with special articles on conditions in Germany, Italy and Russia. Of special interest to psychologists: Academic Freedom, and Limitations on the Freedom of Research and Teaching in the Social Sciences.—*L. J. Stone* (Vassar).

5808. Cohen, M. R. *Minimizing social conflicts.* *Ann. Amer. Acad. polit. soc. Sci.*, 1939, 203, 114-123.—A discussion of the bases and functions of conflict in human society, and of various techniques for its suppression or control. Some special applications to the problems of race antagonism and of refugees are suggested.—*L. J. Stone* (Vassar).

5809. Criswell, J. H. *A sociometric study of race cleavage.* *Arch. Psychol.*, N. Y., 1939, No. 235. Pp. 82.—This study was made on New York City negro and white public grammar school children. Race preference is weaker and more variable in the first four grades, but is significantly present in both races in the second grade. Even when race withdrawal does not occur, color preference may be present. Younger classes accord more prestige to the other race than do older ones. Even when exhibiting preference for their own group, they are likely to confer special popularity on a member of the other group. The role played by intimacy in the relationship between the races leads to a differentiation between primary self-preference, derived from indoctrination, and secondary self-preference, based on rejection by the other race in the school situation. It is concluded that attitudes leading to race cleavage are initiated by the community and assimilated much more fully by whites than by colored children in the schools. In its development cleavage is a special form of the general age-increase of mutual relationships which occurs in school classes.—*E. M. Achilles* (Columbia).

5810. Dodd, S. C. *A tension theory of societal action.* *Amer. sociol. Rev.*, 1939, 4, 56-77.—The author presents a "system of definitions and symbols for societal processes" and gives several examples of its application to concrete data. The purpose of the

system "is partly classificational, i.e., to make an orderly system of concepts built on a logical basis that can be indefinitely extended. Perhaps more useful than this is the more precise observation and even measurement of these processes that is promoted by these definitions which reduce the concepts to measurable entities."—*I. L. Child* (Harvard).

5811. Drake, R. M. *Factorial analysis of music tests by the Spearman tetrad-difference technique.* *J. Musicol.*, 1939, 1, 6-10.—Drake's tests of musical memory and retentivity, Kwalwasser's test of tonal movement, and Seashore's measures of pitch, rhythm, intensity, time, and tonal memory were given to 163 "unmusical" boys. The scores were treated by the Spearman tetrad-difference technique. More than one common factor was found. It is suggested that the major factor may be "memory for auditory items" or more likely "ear-mindedness." The five Seashore tests "do not quite satisfy the criterion of division into independent measurements of isolated capacities." "There is a specific group factor between Pitch and Intensity and another between Intensity and Time." It is suggested that in any testing program pitch and one of the memory tests invariably be included.—*P. R. Farnsworth* (Stanford).

5812. Dudley, H. *The automatic synthesis of speech.* *Science*, 1939, 89, 399.—Abstract.

5813. Enke, W. *Handschrift und Charakter im exakten Versuch.* (Exact experiments on the relationship of handwriting and character.) *Klin. Wschr.*, 1938, 17, Teil 2, 1624-1627.—Klages' graphological interpretations are very symbolic and subjective. Enke's objective method is the measurement of pressure in handwriting as the expression of special intrapsychic tension or release. Pressure variations correspond to Kretschmer's phenotypes. They can be represented in exact percentages. Writing movements are only a part of the general motility, which forms a unit in each individual.—*P. L. Krieger* (Leipzig).

5814. Essen, O. v. *Deutsche Wortakzentuierung experimentalphonetisch untersucht.* (Word accent in German investigated by experimental phonetics.) Hamburg: Preilipper, 1938. Pp. 15.

5815. Fantham, H. B. *Social biology and some of its cultural and ethical implications.* *Scientia, Milano*, 1939, 65, 324-330.—In social biology, man has to be considered in relation to the world around him. Man has to exercise responsiveness to the environment. Study of the life of animals has to recognize the development of such ethical principles as capacity for leadership, division of labor, and subordination of self for the good of the community. While with man physical evolution may have stopped, there is room for further mental and spiritual development. Every course in social biology must include these aspects of the subject.—*E. Farnsworth* (S. Illinois State Normal University).

5816. Farnsworth, P. R. *An analysis of the behavior of critics.* *J. Musicol.*, 1939, 1, 41-44.—An indirect probe is offered for the study of the back-

grounds of newspaper critics. 300 college students were presented with sets composed of 3 criticisms of the same performance. "These three were paired and the subjects were asked to select the most alike, next most, and least alike pairs (the pairs which could most, next most, and least readily have been written by the same reviewer)." Two groups of students agreed well in these tasks.—*P. R. Farnsworth* (Stanford).

5817. **Feldman, V.** *Les structures formelles de la laideur et le problème du fantastique.* (The formal structure of ugliness and the problem of the fantastic.) *J. Psychol. norm. path.*, 1938, 35, 197-210.—The author discusses ugliness as an esthetically positive thing rather than as the negation of beauty. The fantastic is considered from the point of view of the structure and morphology of fictitious beings.—*R. E. Perl* (New York City).

5818. **Frisch, K. v.** *Sprache der Bienen.* (Language of bees.) (Film.) Berlin: Reichstelle für den Unterrichtsfilm, 1926. 316 ft., 15 mm. (silent). Sale price on request.—Colored cups, placed near a hive, are filled with sugar solution. Bees, attracted by the colors, discover and ingest the solution. Upon their return to the hive, they discharge it and allegedly inform others of their discovery by droning. New bees now visit the cups and after returning to the hive also participate in the droning. This cycle continues until all bees in the hive have sampled the sugar solution.—*L. F. Beck* (Oregon).

5819. **Gansl, I.** *Vocabulary: its measurement and growth.* *Arch. Psychol.*, N. Y., No. 236. Pp. 52.—The aims of the study were to construct, standardize, and scale an improved test of vocabulary for grades 3-8, to determine the nature of the age-progress curve of the vocabulary function, and to learn whether any significant sex differences in vocabulary exist within this range. The final tests were given to 3306 New York City public school children in grades 3-8. The results indicate that boys are slightly superior to girls between 8 and 14 years; the difference is unreliable but consistent. The grade results in terms of raw and scaled scores show a steady and fairly constant increase in vocabulary ability from the lower to the upper grades.—*E. M. Achilles* (Columbia).

5820. **Garth, T. R., & Foote, J.** *The community of ideas of Japanese.* *J. soc. Psychol.*, 1939, 10, 179-185.—84 Japanese and 156 white children in a Los Angeles high school were compared on a 5-minute continuous association test. The Japanese boys were found to be more like white girls than white boys were like Japanese girls. Japanese boys and girls were less similar than white and Japanese girls. More similarities than differences were found.—*G. Brighouse* (Occidental).

5821. **Gemelli, A.** *Caratteristiche e variazioni individuali del linguaggio umano: mezzi forniti dall'elettroacustica per rilevarle e valutazione fisiopsicologica dei risultati.* (The characteristics and individual variations of human language: methods furnished by electro-acoustics and physico-psycho-

logical evaluations of the results.) *Boll. Soc. ital. Biol. sper.*, 1938, 13, 321-323.—Using results obtained over a long period of study on the techniques of analyzing sounds by applying methods of electro-acoustics, the author formulates certain premises on which may be based a comparative examination of language sounds and the form of these sounds, data which concern both phonetics and linguistics.—*R. Ricci* (Rome).

5822. **Gemelli, A.** *Nuovi risultati nell'applicazione dei metodi dell'elettroacustica allo studio della psicologia del linguaggio.* (Recent results obtained from the application of electro-acoustic methods to the study of the psychology of language.) *R. C. Semin. mat. fis. Milano*, 1937, 11, 1-21.—The author shows how psychology can use electro-acoustic methods in the study of language.—*R. Ricci* (Rome).

5823. **Ghiselli, E. E.** *All or none versus graded response questionnaires.* *J. appl. Psychol.*, 1939, 23, 405-413.—With questionnaires having to do with belief in the sincerity of advertising it was found that when respondents were permitted to qualify their opinions they responded in a more favorable fashion and more of them were willing to respond. When the qualifications of opinion were disregarded and a simple notation taken of whether the opinions were favorable or unfavorable the results were different from those obtained when the qualifications were taken into account.—*E. E. Ghiselli* (Maryland).

5824. **Gottschick, J.** *Sprachpsychologische Zwillingsuntersuchungen.* (Studies with twins in the psychology of language.) *Arch. ges. Psychol.*, 1939, 103, 1-70.—Short talks by the 33 subjects, who included 13 pairs of twins, were recorded and the records analyzed according to Scheidt's functional classification of speech elements. Statistical studies of twin and non-twin differences, sex differences, choice of topic, differences in education and background, are tabulated for mono- and dizygotic twins and the controls. In general it appears that environmental influences are virtually all-important in regard to spoken language usage. Undue optimism concerning the possibilities of drawing conclusions about heredity from studies of twins is criticized.—*H. D. Spoerl* (American International College).

5825. **Gregory, W. S.** *Ideology and affect regarding "law" and their relation to law-abidingness. Part I. Character & Pers.*, 1939, 7, 265-284.—The purpose of this study was (1) to determine whether it is possible to construct scales based upon ideology by using the method of equal-appearing intervals, and, if so, (2) to determine the correlation between these ideological scales and scales measuring attitudes and behavior. The present section presents the techniques used and the scales as they were finally developed. A subsequent section will present data obtained.—*M. O. Wilson* (Oklahoma).

5826. **Harms, E.** *Rural attitudes in modern urban life.* *Soc. Forces*, 1939, 17, 486-489.—This paper presents the thesis that many activities of city

life may be traced to their origin in the earlier social attitudes of rural American life. The rural attitudes discussed are the care of animals, the growing of plants, the love of land, the interest in folk art and folk custom. Attempts to ruralize city populations would proceed with fewer difficulties if the urban dweller were first made conscious of his rural social attitudes.—*R. M. Gagné* (Brown).

5827. **Hartnacke, W.** 15 Millionen Begabtenausfall! (Deficit of 15 million gifted people.) München: J. F. Lehmann, 1939. Pp. 111.—In the next two generations the German birth differential for higher occupational groups will result in a comparative loss of 15 million gifted people. No more were born in these groups in 1937 than in 1855. There are few exceptions to the trend. More than $\frac{3}{4}$ of the population fails to finish school; in one region a decrease in performance of 12% during 14 years was observed in testing those leaving school to enter trades. The problem is basically biological, since heredity is considered the more important factor. More weeding-out by schools would be helpful.—*P. L. Krieger* (Leipzig).

5828. **Hartwell, D. John Q.** Public answers nineteen questions on coal. *Coal Age*, 1939, July. Pp. 2.

5829. **Heimann, E.** The refugee speaks. *Ann. Amer. Acad. polit. soc. Sci.*, 1939, 203, 106-113.—The experiences of elation and anticipation of the German refugee arriving in the United States are described, along with the subsequent disappointments. The resulting attitudes are related to the essentially bourgeois, conservative, and highly "respectable" background of the newcomer. In connection with the problem of acquiring a new language the author gives an exposition of essential differences in the "spirit" of the German and English languages as they affect scientific and literary writing. "In Germany the people are expected to look up to the learned; in America, as in England and France, the learned are expected to make themselves as clear, to put their case as simply, as is feasible under the circumstances. Hence the translating and rethinking of our heritage in the new linguistic medium is tantamount to a training in the atmosphere of democracy." The Americanized German may contribute to America a purified European tradition; de-Germanization represents the purification and the broadening of previously provincial thought.—*L. J. Stone* (Vassar).

5830. **Héraucourt, W.** Die Darstellung des englischen Nationalcharakters in John Galsworthys "Forsyte Saga." (The presentation of English national character in John Galsworthy's "Forsyte Saga.") Marburg: G. Elwert, 1938. Pp. 110. RM. 4.00.—The English national character of the 19th century corresponds to type J₁, with which Jaensch identifies the Nordic English in general. It has a special tendency, due to the period, to extreme degeneration. The *Forsyte Saga* corresponds exactly to this type.—*P. L. Krieger* (Leipzig).

5831. **Hollingworth, L. S.** What we know about the early selection and training of leaders. *Teach.*

Coll. Rec., 1939, 40, 575-592.—We now know how to select in childhood those endowed with one indispensable quality of leadership, extraordinary intelligence, which is a permanent quality and one likely to be combined with other desirable traits. The intellectual and emotional training of potential leaders is briefly discussed.—*J. M. Stalnaker* (Princeton).

5832. **Hönig, E.** Psychologisches über agrammatische Kinder. (Psychological remarks concerning agrammatic children.) *Nervenarzt*, 1939, 12, 248-249.—The agrammatic child may render nonsense syllables and then be taught to repeat short sentences with right, wrong, or no intonation. If the meaning of a sentence is grasped, the agrammatic child will select the essential words in a wrongly intoned sentence.—*P. L. Krieger* (Leipzig).

5833. **Jaensch, E. R.** Der Hühnerhof als Forschungs- und Aufklärungsmittel in menschlichen Rassenfragen. (The chicken yard as a medium for research and explanation on human race problems.) Berlin: Verlag Paul Parey, 1939. RM. 1.20.—See XIII: 5290.

5834. **Jaensch, E. R.** Das Wahrheitsproblem bei der völkischen Neugestaltung von Wissenschaft und Erziehung. (The truth problem in the new political orientation of science and education.) Langensalza: Beyer, 1939. Pp. 40. RM. 1.

5835. **Janney, J. E.** A technique for the measurement of social adjustment. *J. exp. Educ.*, 1939, 7, 203-205.—This study was made in a small liberal arts college for women. Objective indices of social ability in relation to the same sex and in relation to the other sex were developed. Success in relation to other women students was indicated by an index of success made out from each student's campus record. Success in relations with the other sex was indicated by number of evening dates. Data on the use of these indices in college prognosis and guidance problems are presented.—*H. W. Karn* (Pittsburgh).

5836. **Jenkins, M. D.** The mental ability of the American negro. *J. Negro Educ.*, 1939, 7, 511-521.—The author presents a critical review of the experimental inter-race and intra-race approach to the problem of the mentality of the American negro. Comparison of the two methods is made which favors the intra-race studies. Data are presented to show that the method of quantitative evaluation has not demonstrated the validity of the hypothesis of racial difference in mental ability.—*W. E. Walton* (Nebraska).

5837. **Kempný, L.** Contribution to the psychological study of prostitution. *Kwart. psychol.*, 1939, 11, 26-40.—The author presents an outline and statement of the problems of prostitution based on an investigation carried on at Brno, Czechoslovakia. The problems include the psychology of the prostitute, the psychology of the individual patronizing prostitution, the psychosocial actions resulting from prostitution, and the relation of prostitution to other institutions (state, law, religion) and to ethical

values within the culture.—T. M. Abel (New York City).

5838. Knobel, H. *Beziehungen zwischen Fehlbildung der Zischlaute und Kiefer-Zahnstellungs-anomalien.* (Relations between faulty formation of sibilants and anomalies in the placement of upper teeth.) *Arch. ges. Phonet.*, 1939, 3, Abb. 2, 108-128.—From 830 histories of lisps and 400 other cases it becomes evident that organic causes (dental defects and gaps, maxillary abnormalities) predispose to faulty formation of sibilants. But these are not the only causes. The correlation of coincidence is $.214 \pm .05$.—P. L. Krieger (Leipzig).

5839. Kraus, H. *Starting life anew in a strange country.* *Ann. Amer. Acad. polit. soc. Sci.*, 1939, 203, 99-105.—In a discussion of the problems of adjustment to life in the United States faced by the German refugee, the author points out some of the everyday ways of living that are new and confusing; indicates some of the more fundamental questions he faces; and suggests the psychological sources of such characteristics as over-aggressiveness and the tendency to remain at the port of entry. Suggestions are given for guiding and assisting the refugee to those who "see him, not at the end of a road, defeated, but at the beginning of his American career, a budding American citizen, eager to assume and share all the responsibilities of a new homeland."—L. J. Stone (Vassar).

5840. Leenhardt, M. *Le temps et la personnalité chez les Canaques de la Nouvelle-Calédonie.* (Time and personality among the Kanakas of New Caledonia.) *Rev. phil.*, 1937, 62, 43-58.—The New-Caledonian verb is invariable, without mood or tense; no relationship is established between the time of action and that of the later narration of the action. Temporal relations within the act are given by the succession of the states or events, and are expressed by adverbs, verbs, or particular morphemes. Consideration of such characteristics of the language is most significant for the problem of the permanent actuality of the myth. The author is led to believe that for the Kanaka the totem never ceases to be contemporaneous; its presence and that of the narrator who speaks of it are two simultaneous events. There is no history, and no linear series of events. There is transfer into each event; each possesses a separate spatio-temporal region into which the narrator projects himself as he relates his story. In brief, each of the juxtaposed times into which the subject is transported is a mythical time. The New-Caledonian finds his personality and determines his existence only in this mythical time.—(Courtesy *Année psychol.*).

5841. Leeuwe, J. de. *Eenige samenhangen tussen mythische uitingen en psychische processen.* (Some connections between mythical expressions and psychic processes.) *Mensch en Maatsch.*, 1939, 15, 259-281.—Mythical tales often contain in condensed form the history of man's psychic genesis. They are based in part on retrospective introspection and unconscious memories, but due to their amor-

phism this relation is not always recognizable. Frequently the momentary emotional set obscures the objective foundation upon which myths are built. Similarities between children's imagination and mythical representation are striking.—H. Beaumont (Kentucky).

5842. Leiris, M. *La croyance aux génies "zar" en Éthiopie du Nord.* (The belief in "zar" spirits in northern Ethiopia.) *J. Psychol. norm. path.*, 1938, 35, 108-125.—The information about the "zar" that is presented in this article was gathered from Christian Abyssinians who practised this cult. The "zar" differ from other spirits in that they are not of divine but of human origin, being the descendants of 15 children whom Eve hid. The "zar" constitutes a population of male and female spirits organized in an hierarchical society with kings, slaves, etc., resembling in every way human society. There are 3 points of view among Christian Ethiopians; (1) the clergy theoretically condemn any cult of spirits and place the "zar" in the class of evil spirits, (2) the scholars fight the "zar" by means of charms and offerings or sacrifices, (3) the popular view is that trance and sacrifice are the proper treatments. Many examples of the influence of the "zar" on human lives are given.—R. E. Perl (New York City).

5843. Lewin, K., Lippitt, R., & White, R. K. *Patterns of aggressive behavior in experimentally created "social climates."* *J. soc. Psychol.*, 1939, 10, 271-299.—5 groups of 10-year-old children were placed successively under autocratic, democratic, and laissez-faire leadership. Hostility, aggression, and apathy were much more common while autocratic control was operating. These observations are interpreted in terms of tension, restricted space of free movement, rigidity of group structures, and style of living.—G. Brighouse (Occidental).

5844. Mauerhofer, H. *Oxfordbewegung und Psychoanalyse.* (The Oxford movement and psychoanalysis.) Bern, Leipzig: Haupt, 1939. Pp. 32. Fr. 1.20.

5845. McCurdy, H. G. *Literature and personality.* *Character & Pers.*, 1939, 7, 300-308.—Although Freud and others have stressed the importance of the study of literary work as an approach to the study of the personality of the author, the method is as yet undeveloped. Several suggestions are offered for use of this method. The novel as a whole and not some part of it must be thought of as representing the personality of the author. The material of the novel should not be contaminated by use of biographical data colored by gratuitous comments, interpolations, or symbolic derivations. If several novels by the same author are being considered, they should be considered in chronological order, so that allowance may be made for changes in the hypothetically projected personality in question. After the analysis has been completed, the analyst may turn to biographical material for supporting data.—M. O. Wilson (Oklahoma).

5846. Neweklufová, G. Wie projiziert sich die seelische Entwicklung des Kindes auf die Sprache? (How does the mental development of the child influence his speech?) *Z. Kinderpsychiat.*, 1939, 6, 22-24.—Second and final installment of the paper, giving the discussion of paragrammatism and stuttering.—D. Shakow (Worcester State Hospital).

5847. Nuttall, W. The memoir of a stammerer. *Psyche*, Lond., 1937, 17, 151-184.—This autobiography deals in some detail with the psychological and social consequences of the author's speech defect, both in childhood and in adulthood, and with his experiences with several types of treatment.—I. L. Child (Harvard).

5848. Orton, S. T. Behavior disorders associated with developmental disorders in language acquisition. *Conn. St. med. Soc. J.*, 1939, 3, 12-14.

5849. Pace, C. R. Factors influencing questionnaire returns from former university students. *J. appl. Psychol.*, 1939, 23, 388-397.—A number of factors were discovered which influence the number of returns from a mailed questionnaire. The method of comparing early and late returns was found to be only partially adequate in studying differences between individuals who do and who do not answer.—E. E. Ghiselli (Maryland).

5850. Pace, C. R. The relationship between liberalism and knowledge of current affairs. *J. soc. Psychol.*, 1939, 10, 247-258.—Approximately 400 college students were given the Eurich-Wilson current affairs test and a "situation-response survey" designed to measure liberal-conservative attitudes. Low but generally positive correlations were found between liberalism and general information.—G. Brighouse (Occidental).

5851. Preissler, W. Stimmumfänge und Gattungen der menschlichen Singstimme. (Voice registers and kinds of human singing voices.) *Arch. ges. Phon., Abt. 2*, 1939, 3, 65-85.—"The voices of singers (368 male, 232 female) have been investigated as to physiological range, from the deepest just perceptible chest voice to the highest attainable. The range was from two and three quarters to three and a half octaves in three quarters of the males and four fifths of the females. The widest range of voice and register was found in bass and soprano, the narrowest in tenor and mezzosoprano. The limits of register were determined and the question of register studied from Nadoleczny's point of view. Finally, the author determined the average pitch of various types of speaking voice."—P. L. Krieger (Leipzig).

5852. Rathe, K. Die Ausdrucksfunktion extrem verkürzter Figuren. (The expressive function of radically foreshortened figures.) London: Warburg Institute, 1938. Pp. 73. 6/.—The device of placing figures in paintings endwise to the observer by orthogonal perspective, which has been widely employed since the 15th century, has often been misinterpreted by artists. It is not merely of representational importance, as generally supposed,

but is primarily expressive. The expressive function depends on a polarity of the effect in the design, and may be used to signify conceptual oppositions. The author proposes experimental study by psychologists. The book is illustrated with 32 half-tone reproductions.—H. D. Spoerl (American International College).

5853. Raubicheck, L., & others. Voice and speech problems. (Rev. ed.) New York: Prentice-Hall, 1939. Pp. 587. \$1.60.

5854. Révész, B. Sur la physio-psychologie de l'amour. (On the physio-psychology of love.) *Arch. gen. Neurol. Psychiat.*, 1937, 18, 325-333.—The author believes that love is not a metaphysical thing but a real fact which is open to physiological and psychological research. He offers proof of this thesis in the form of data from the mental and affective life of both sane and insane subjects.—R. Ricci (Rome).

5855. Révész, G. La fonction sociologique de la main humaine et de la main animale. (The sociological function of the human hand and of the animal hand.) *J. Psychol. norm. path.*, 1938, 35, 26-50.—The author discusses the biological function of the hand, its sociological significance, the capacity of the anthropoid hand, and the essence of the human hand. He concludes that from the point of view of biology there is no important difference between the hand of humans and that of monkeys. One of the outstanding differences between the human hand and that of monkeys (including anthropoids) lies in the ability to make tools. It is not necessary to look for the line of demarcation between animals and men in the region of spiritual manifestations, for it can be found by examining the hand and its uses.—R. E. Perl (New York City).

5856. Saussure, R. de. Le miracle grec. (The Greek miracle.) *Rev. franç. Psychanal.*, 1938, 10, 471-536.—Economic and psychological changes were responsible for the sudden appearance of the scientific method of thinking (the miracle of Grecian culture) in Greece. Many of the indigent population were driven from the land and home of their fathers. In their new surroundings ancestral worship, dominance of the father, and Oedipus guilt were less oppressive. Democratic and free thinking developed and the new social order provided the soil from which the scientific manner of thinking grew.—D. G. Ryans (William Woods College).

5857. Sauvageot, A. De quelques aspects de la fonction prédicative. (On some aspects of the predicative function.) *J. Psychol. norm. path.*, 1938, 35, 185-197.—The predicative function is very difficult to define, but it seems to be the result of certain complex relationships which are sometimes syntactic, sometimes associative. There is no universal formula for predication, for it differs in different languages.—R. E. Perl (New York City).

5858. Seashore, C. E., Small, A., & Horne, E. P. The function of the mute on the violin. *Science*, 1939, 89, 403-404.—Abstract.

5859. Sommerfelt, A. *Les formes de la pensée et l'évolution des catégories de la grammaire.* (Forms of thought and the evolution of categories of grammar.) *J. Psychol. norm. path.*, 1938, 35, 170-185.—Since thought and logic are determined by language, the comparative study of the grammatical systems of the different languages of the world ought to help us to trace the evolution of forms of thought. The author discusses in detail the language and thought processes of the Australian aborigines.—R. E. Perl (New York City).

5860. Stahr, W. *Beiträge zur Frage der krankhaften Stehlsucht (Kleptomanie).* (Contributions to the problem of kleptomania.) Berlin: Michel, 1935. Pp. 23.

5861. Stinchfield-Hawk, S. *Security for the child with a speech handicap.* *Crippled Child*, 1939, 16, 179-182.

5862. Stopa, R. *Die Schnalzlauten im Zusammenhang mit den sonstigen Lautarten der menschlichen Sprache.* (The click phonemes and their relationship to other types of phonemes in human speech.) *Arch. ges. Phon., Abt. I*, 1939, 3, 89-108.—"A review of clicking and the formation of individual clicks. The author investigates the function of click phonemes in the vocal system of any one language, taking the clickings of the Nama Hottentots as an example. He shows how clicking occurs in various languages and under what circumstances. He thinks that the clicks form an important consonantal element in the fundamental sound system of human speech."—P. L. Krieger (Leipzig).

5863. Sumner, F. C., & Campbell, A. S. *Attitudes toward the administration of justice.* *J. Psychol.*, 1939, 8, 23-52.—Of 118 statements relating to the administration of justice, there were 24 on which 67% or more of 1082 college students and 431 adults (without regard to race, sex, court experience, college training) agreed in a positive or negative reaction. A qualitative study of these all-group positive or negative reactions revealed that an abolition of the present system of administering justice is not desired, but rather certain modifications of the existing system. The highest percentages of correspondence in reaction type were found between non-court-experienced college students and court-experienced college students (93%), and between non-court-experienced adults and court-experienced adults (89%).—J. McV. Hunt (Brown).

5864. Thorndike, E. L. *How may we improve the selection, training, and life-work of leaders?* *Teach. Coll. Rec.*, 1939, 40, 593-605.—A discussion is given of the life-work and financial remuneration of leaders, their training, education, and selection, and the attitude of mankind toward them.—J. M. Stalnaker (Princeton).

5865. Tomaszewski, T. *Bezrobocie jako zagadnienie psychologiczne.* (Unemployment as a psychological problem.) Lwów: Uniwersytetu Jana Kazimierza we Lwowie, 1938. Pp. 44.—The author makes an analysis of psychological studies of un-

employment, especially those of Lazarsfeld, Zeisel, and Zawadzki, and of autobiographies of unemployed persons obtained by the Institute of Social Economy in Warsaw in 1933.—T. M. Abel (New York City).

5866. Wahl, M., & Cotte, S. *La gaucherie et le bégaiement.* (Note pour servir de préface à l'étude de certains troubles du langage.) (Left-handedness and stuttering. A note as a preface to the study of certain language difficulties.) *Ann. méd.-psychol.*, 1939, 97, Part 1, 765-769.—Left-handedness and stuttering often appear in the same individuals and in the same families. They are also often found in the relatives of persons with marked speech retardation. The stuttering is apt to occur when a left-handed person is forced to use his right hand.—M. B. Mitchell (Psychopathic Hospital, State University of Iowa).

5867. Warner, L. *A survey of stockholder opinion.* New York: Hartwell, Jobson & Kibbee, 1939. Pp. 9.

5868. Wepman, J. M. *Familial incidence of stammering.* *J. Hered.*, 1939, 30, 207-210.—The family histories of a group of 250 stammerers, matched for age, sex, and social status with a similar group of non-stammerers, were examined for incidence of stammering among relatives. Parents of stammerers were personally interviewed, the cases being obtained from six speech clinics in the Middle West. A proportion of 2.2 : 1 or 68% of stammering was found in the background of the afflicted, while the proportion of stammering for the controls dropped to .18 : 1 or 15.6% of their group. This is a highly reliable difference, the ratio being 6.12 : 1. Stammering appears four times as often in the male as in the female. Three tables and a short pedigree chart are included with this article.—G. C. Schwesinger (American Museum of Natural History).

5869. Wheeler, R. H. *Mental hygiene of the family.* *Ment. Hlth Observ.*, 1939, 6, 1-10.—"The main psychological problem of love and marriage is the problem of preserving the self while at the same time it is surrendered to a mate. It is not, basically, a problem of the feelings and emotions associated with the act of reproduction. These feelings should and do take care of themselves when the larger problems are solved. It is the feelings and emotions associated with the preservation of the personality that do not take care of themselves, for the art of surrendering oneself for an entire lifetime to another person, and at the same time of preserving one's individuality, has to be learned, and the lesson is not always an easy one."—M. Keller (Butler Hospital).

5870. Yule, G. U. *On sentence-length as a statistical characteristic of style in prose; with application to two cases of disputed authorship.* *Biometrika*, 1938, 30, 363-390.—Frequency distributions of sentence-length (1-5 words, 6-10, 10-15, etc.) are given for a pair of samples from each of (1) Bacon's *Essays*, (2) Coleridge's *Biographia Literaria*, (3) Lamb's *Elia* and *Last Essays of Elia*, (4) Macaulay's *Essays*; the two samples from any one author

agree fairly closely with each other, while those from distinct authors differ. The method is then applied to two cases of disputed authorship. (A) The *Imitatio Christi*: the distributions of sentence-lengths in samples from the *Imitatio* agree well with those for samples from admitted works of Thomas à Kempis, but samples from the works of Gerson, to whom the *Imitatio* was at one time ascribed, show a much larger proportion of long sentences. (B) The *Observations upon the Bills of Mortality* by John Graunt, by some attributed to Petty: there are no other works by Graunt with which to compare, but Petty's argumentative writings show a much higher proportion of very long sentences; erratic grammar and punctuation, however, make the limits of his sentences very difficult to define.—G. U. Yule (Cambridge, England).

[See also abstracts 5473, 5519, 5565, 5579, 5616, 5649, 5670, 5685, 5698, 5756, 5758, 5778, 5942, 5954, 5957, 5969, 5974.]

CRIME AND DELINQUENCY

5871. Cantor, N. F. *Crime and society; an introduction to criminology*. New York: Holt, 1939. Pp. 472. \$3.00.

5872. Di Tullio, B. *La ricostituzione delle cattedre di antropologia criminale*. (Reconstruction of university departments of criminal anthropology.) *Riv. Diritto penitenz.*, 1939, 10, 379-404.—The author discusses the necessity for a study of criminal anthropology by all persons who are engaged in the fight against criminals and who deal with penal law. Penal law should be oriented more than it is at present toward a study of the delinquent's personality and a re-education of the delinquent considered as an individual case. A judge covering criminal cases should have a knowledge of criminal anthropology, viewed as a discipline which looks at the problem of criminality from the biopsychological viewpoint in all its various human and social relationships.—R. Ricci (Rome).

5873. Draper, P. A. *Mental abnormality in relation to crime*. *Amer. J. med. Jurisprud.*, 1939, 2, 161-165.—Motivations underlying the actions of mentally abnormal criminals are listed. The acceptable criteria of criminal responsibility are: (1) knowledge that the act is wrong, and (2) will power enough to resist the impulse to commit the crime. Psychoneurotics, malingerers, and psychopathic personalities are considered mentally ill but still responsible for their crimes. Mental defectives and psychotics are not responsible for their crimes. The psychiatric viewpoint in the treatment of offenders is stressed. Bibliography.—A. Chapanis (Yale).

5874. East, W. N. *The modern psychiatric approach to crime*. *J. ment. Sci.*, 1939, 85, 649-666.—In the light of the Criminal Justice Bill before the English Parliament, which is fundamentally concerned with medical observation and treatment of offenders, certain phases of psychotherapeutic and psychiatric criminal work are discussed. The aims

of *psychotherapy* in prisons are: (1) prevention of future criminal conduct; (2) removal or modification of abnormalities which make it difficult for the offender to adapt himself to his environment and society; and (3) elucidation, during investigation and treatment, of the causations of forms of criminal conduct. The aims of *psychiatry* in prisons are: (1) presentation at a court of trial of the mental condition of an accused person and its relation to his responsibility; (2) certification and transfer of convicted prisoners who are insane or mentally defective; and (3) care and supervision of prisoners who are responsible in law, but who on account of excessive or other abnormal mental reactions require special organization and grading of their work, special consideration regarding their associates, and other special methods of psychiatric treatment.—D. G. Ryans (William Woods College).

5875. Fairbairn, W. R. D., & Rudolf, G. de M. *Psychological factor in sexual delinquency*. *Ment. Hyg., Lond.*, 1939, 5, 44-53.

5876. Finzi, M. *L'errore giudiziario e la cultura psicologica del giudice*. (Legal errors and psychological training in judges.) *Arch. antrop. crim., Suppl.*, 1937, 57, 367-368.—The most frequent source of legal error, greater than that arising from defective legal structure, comes from a lack, on the part of the judges, of psychological training and a knowledge of disciplines suitable for criminal cases.—L. Canestrelli (Rome).

5877. Garner, J. R. *Malingering*. *Amer. J. med. Jurisprud.*, 1939, 2, 173-177.—There are six distinct classifications of malingering from the standpoint of the nature and purpose of the deceit: illness, deformity, rape, pregnancy, insanity, and injury. The author discusses each of these with regard to symptoms expected from really ill persons and malingerers. Tests to distinguish the two are cited.—A. Chapanis (Yale).

5878. Loudet, O. *La confession y el remordimiento en los condenados*. (Confession and remorse among convicts.) *Psiquiat. y Criminol.*, 1937, 2, 27-44.—Of 400 delinquents examined at the National Penitentiary of Buenos Aires (200 thieves and 200 murderers), one finds those who sincerely repent (13 out of 400) only among the occasional delinquents, and not among the habitual delinquents (thieves and murderers). In this latter group one finds, on the contrary, individuals who boastfully confess (15% of the thieves, 2% of the murderers). Those who confess with indifference are the most numerous (40% of the habitual murderers, 35% of the habitual thieves). The occasional criminals, on the other hand, display emotion. Those who insist on their innocence represent 22% of the constitutional murderers and 36% of the habitual thieves. Of the occasional murderers those who insist on their innocence (9%) were almost without exception those involved in street brawls, and whose guilt, despite their conviction, may be open to question. Confession with concealments and distortions is the most frequent.—(Courtesy *Année psychol.*).

5879. Macrae, A. A Borstal experiment in vocational guidance: a critical notice. *Hum. Factor, Lond.*, 1937, 11, 187-189.—Only 45% of juvenile delinquents placed in reform schools succeed in the jobs which are assigned to them in the various workshops when it is the chief superintendents who assign the jobs. On the contrary, 70% succeeded when the assignments were in charge of M. A. Rodger, director of vocational guidance in the N.I.I.P., after psychotechnical tests. Given on the one hand the defective human material with which this experiment was concerned, and on the other the very limited group of jobs among which assignments could be made, this result is striking evidence for the methods of vocational guidance. The adoption of these methods in reform schools which permit the assignment to inmates of work which they can perform with liking and success would facilitate the task of administration and would contribute to the formation of better workers and better citizens.—*W. S. Verplanck, Jr.* (Brown).

5880. Menesini, G. Le moderne dottrine caratterologiche nei confronti della antropologia criminale. (Modern characterological doctrines in relation to criminal anthropology.) *Arch. antrop. crim., Suppl.*, 1937, 57, 110-147.—*L. Canestrelli* (Rome).

5881. Natoli, A. Antropologia criminale o psicologia differenziale? Nota sintetico-critica. (Criminal anthropology or differential psychology? A synthetic-critical observation.) *Neopsichiatria*, 1937, 3, 360-365.—The author discusses the fundamental principles of criminal anthropology and differential psychology and gives a résumé of recent applications to the study of criminals of data gathered by the constitutionalist school, the endocrinologists, and the psychoanalysts. For an interpretation of certain of the complex functions of our mental life, he believes we must use data compiled by the biological sciences.—*R. Ricci* (Rome).

5882. Odewald, W. Die Föhn und sein Einfluss auf Kriminalität und Selbstmordneigung. (The influence of the Föhn on criminality and suicidal inclination.) *Kriminalistik*, 1939, 13, 135-137.—The Föhn is a violent, warm, dry wind with sudden shifts, which sweeps through Alpine valleys, most often in spring and fall. It is not clear whether its disturbing effects are due to the sudden drop in barometric pressure preceding it, to atmospheric electricity, or to ozone. It does not affect all persons, as natives may be insensitive while newcomers may suffer increasingly. The main symptoms of the "Föhn disease" are malaise, irritability, loss of skill and working capacity, sleepiness, and more or less depression. It has been called a mass psychosis. There is an increase in traffic accidents, crimes, and suicides. The crimes are such as originate in irritability and aggression, and for persons with suicidal pre-occupations the wind may be the last straw. After the Föhn susceptible persons feel unusually well.—*M. E. Morse* (Baltimore).

5883. Rizzati, E. Le nuove vedute sul carattere e l'antropologia criminale. (New conceptions on

character and criminal anthropology.) *Arch. antrop. crim., Suppl.*, 1937, 57, 148-168.—*L. Canestrelli* (Rome).

5884. Schmidhäuser, H. Zur Frage des Jugend-arrestes. (The question of youth in custody.) *Mscr. Krimiol.*, 1939, 30, 257-286.—Short-term probation for young prisoners has proved entirely inadequate in Germany. The author denounces speedy discharge and urges reform.—*P. L. Krieger* (Leipzig).

5885. Tanagras, A. I fenomeni psichici e la criminologia. (Psychic phenomena and criminology.) *Ric. psich.*, 1937, 662-671.—Utilization of the psychological sciences in criminology is based on the following phenomena: psychometry, thought transmission, clairvoyance, and posthypnotic suggestion.—*R. Ricci* (Rome).

5886. [Various.] Psychological treatment of the abnormal delinquent: discussion at the Institute on February 2nd. *J. roy. Inst. publ. Hlth Hyg.*, 1939, 2, 147-150.

5887. Wilson, O. W. Police crime prevention activity. *Amer. J. med. Jurisprud.*, 1939, 2, 1-8.—The coexistence of desire and opportunity results in crime. Crime repression, the elimination of opportunities to commit crime, is accomplished by more efficient patrolling, installation of alarm systems, etc. Crime prevention, the elimination of desires to commit crime, is carried out mainly with juveniles, since the molding of attitudes and habits is easier at that stage. Crime prevention activities take three forms: (1) The establishment and expansion of community-wide boys' organizations designed to engage their leisure time constructively; (2) the attack against influences (gambling, obscene literature, sex pervers) which tend to develop criminal desires in children, either directly or indirectly; and (3) individual attention to the small percentage of problem children who are potential criminals. In this last respect the police are not duplicating the work of social agencies, but serve to force the immediate solution of the maladjustment.—*A. Chapanis* (Yale).

[See also abstracts 5712, 5733, 5837, 5860.]

INDUSTRIAL AND PERSONNEL PROBLEMS

5888. Anderberg, R. Selecting personnel for the Swedish State Railways with the aid of psychological tests. *Occup. Psychol., Lond.*, 1939, 13, 211-222.—Since 1934 tests for selecting subordinates for the S.S.R. have been used. Lately methods have been introduced for selecting the members of the special training courses that are open only to candidates for official positions. Job analyses of these positions were made, and on their bases four types of tests were constructed: intelligence, reaction time, attention, and memory; in each case the contents of the tests resembled the tasks the jobs required. 149 officials served as a control group for their validation. These were rated and divided into two groups, A and B. According to the test results 45% of the A's

and 7% of the B's were placed in the top group. Critical scores were established for each test and for the test battery, and on their basis candidates are now being selected.—*H. Moore* (Mt. Holyoke).

5889. **Bruyère, M. J.** *Quelques données sur l'intelligence logico-verbale et les aptitudes techniques pour l'orientation vers la carrière d'ingénieur.* (Some data on logico-verbal intelligence and the technical aptitudes requisite for the career of engineer.) *Bull. Inst. nat. Orient. prof.*, 1937, 9, 141-147.—The application of the combined Foucault tests for the measurement of logico-verbal intelligence and Piéron's tests for the determination of technical aptitudes to 58 students in a beginning course in a school of arts and trades yield the following correlations: intelligence (Foucault) with technical aptitude, .41; intelligence with mathematics grade, .32; technical aptitude with mathematics grade, .45; technical aptitude with manual-training grade, .22. The technical aptitudes would seem to be more closely related to intelligence than to the manual aptitudes, with which one must be careful not to confuse them; and there seems to exist an appreciable interdependence between these aptitudes and intelligence, despite the diversity and complexity of the functions involved. A student who did well in both these series of tests should become an excellent engineer; but these aptitudes do not necessarily imply manual ability.—(Courtesy *Année psychol.*).

5890. **Dudycha, G. J.** *Dependability and clerical aptitude.* *J. appl. Psychol.*, 1939, 23, 332-336.—A moderate relationship was found between clerical ability as measured by name checking and dependability in returning borrowed books from the library. No comparable relationship was observed when clerical ability was measured by number checking.—*E. E. Ghiselli* (Maryland).

5891. **Finch, F. H., & Odoroff, M. E.** *Employment trends in applied psychology.* *J. consult. Psychol.*, 1939, 3, 118-122.—An analysis of data referring to unemployment in the field of applied psychology during the past 22 years.—*P. S. de Q. Cabot* (Simmons).

5892. **Forbes, T. W., & Matson, T. M.** *Driver judgments in passing on the highway.* *J. Psychol.*, 1939, 8, 3-11.—A study of driver judgments involved in overtaking and passing on the open highway was made by means of a photographic technique which allowed observations to be made from a moving vehicle. 795 complete passes were observed. It was found that unless the overtaking car was overhauling the overtaken car at more than a certain critical rate (6.5 miles per hour minimum, 8-10 miles per hour most frequent speed differential), its driver tended to drop into line rather than pass. A new time factor, "clearance time," was obtained which is recommended for consideration in addition to perception and reaction time in computing safe passing distance. The data on minimum speed differentials suggest a psychological factor tending to cause the grouping or entraining of vehicles on the open highway.—*J. McV. Hunt* (Brown).

5893. **Galand, A., Girard, P., & Hudelo, A.** *Permis de conduire et examens psychophysiologicals.* (Drivers' licenses and psychophysiological tests.) *Bull. Soc. méd. Prat.*, 1937, Pp. 16.—A presentation of the testing methods employed by the Automobile Club of the Île de France. The psychophysiological study includes the following items: a test of estimation of probable collisions with moving objects (with a "eurometer"), a test of reaction to colored signal lights (with a "tachyphotometer"), a dynamometric test, a test of emotivity, one of attention, and one of intelligence. Finally there are a series of examinations of vision; in these there are determined the individual's visual acuity, his visual field, his threshold, and his discrimination in dim illumination.—(Courtesy *Année psychol.*).

5894. **Gauer, O., & Ruff, S.** *Die Erträglichkeitsgrenzen für Fliehkräfte in der Richtung Rücken-Brust.* (The limits of endurance for flying in the dorsal-prone position.) *Luftfahrtmedizin*, 1939, 3, 225-230.—In the dorsal-prone position a person endures for a longer time—more than 30 sec.—centrifugal speeds corresponding to at least 8-10 g. Discomfort is slight. It is entirely possible to exceed this limit, especially for a short period. Above 8 g., petechial hemorrhages in the retina occur in longer centrifugal experiments. The nature of the support for the body is important, also a mechanism to prevent raising the head when an increase of speed begins.—*P. L. Krieger* (Leipzig).

5895. **Gemelli, A.** *La psicotechnica nella concezione corporativa della società.* (The importance of psychotechnics in a corporate society.) *Atti. Soc. ital. Progr. Sci.*, 1938, 5, 269-286.—The author criticizes the current trend taken by psychotechnics. Psychotechnics should be considered as a means for the scientific study of human labor and for an evaluation of individual aptitudes with respect to a given task. It should endeavor to elevate human labor, a purpose which could be accomplished without damage to the individual. Such a concept of psychotechnics would profit both the individual and the state.—*R. Ricci* (Rome).

5896. **Hammond, A. M.** *Job analysis and merit rating.* *Soc. Adv. Mgmt J.*, 1939, 4, 100-104.—Job rating involves four steps: (1) Job analysis, i.e. breaking down the job into its elements, duties, responsibilities, contacts, hazards, and necessary qualifications. These may be gathered from the employee or the section head, or by means of a conference of representative groups. (2) Classification, thus putting under one title all positions in the company which have the same duties, responsibilities, and qualification requirements. (3) Rating, secured by a rating scale on which the basic factors are weighted. (4) Determination of pay ranges, with minimum and maximum rates, improved production rates, above-standard production rates, and exceptional rates for the unusually responsible and versatile, in each range. Merit rating should provide for (a) rating workers in terms of facts, (b) stating qualities in simple and definite statements, not in

letters or percentages, (c) optional selection of degrees of the various qualities and traits, (d) rating by two superiors, (e) reviewing the ratings with employees. Well organized wage determination increases the incentive force of the wages paid, retains the services of desirable employees, gives incentives for advancement, educates junior executives in job evaluation, grades jobs in terms of human demands, and provides a basis for discussion of job disputes.—*H. Moore* (Mt. Holyoke).

5897. Hofe, K. *Beitrag zur Frage der Berufsfähigkeit derjenigen, die in der Jugend wegen angeborenen Stars operiert wurden.* (Contribution to the question of the professional capacities of those who have been operated in their youth for congenital cataract.) *Arch. Augenheilk.*, 1936, 110, 34-38.—Certain authors have insisted on the advisability of sterilizing individuals presenting a serious form of congenital cataract, claiming that the cataract operation leaves vision inadequate for the demands of modern vocations. The author concludes from his own research and the work of Grod, of Klare, and of Heine that for the majority of cases of double cataract operated, the improvement in vision soon permits scholastic work or entrance into a variety of occupations. All the contrary cases were complicated by other visual defects or by intellectual deficiency. The latter was present in 5 cases described by the author, who is of the opinion that it is not attributable to the cataract.—(Courtesy *Année psychol.*).

5898. Katz, D. *Studies on test baking: III. The human factor in test baking. A psychological study.* *Cereal Chem.*, 1937, 14, 382-396.—Bakers appreciate the qualities of dough. The present problem is to determine what these qualities are, how they are determined, and with what precision. Katz has found that the qualities "body," "spring," etc., do not correspond to properties which have been physically defined, such as viscosity or elasticity. The sensorial complex on which the judgments are based consist in tactual, visual, auditory, and tactual-muscular data. These form with memories and experience a syncretic whole, which is badly defined. The sensitivity of bakers, founded on this, is markedly inferior to methods which employ an objective procedure in the determination of the properties of a batch of dough. Although there may be great consistency in the judgments of one baker, there are great differences in the judgments of different bakers.—*W. S. Verplanck, Jr.* (Brown).

5899. Laycock, S. R., & Hutcheon, N. B. *A preliminary investigation into the problem of measuring engineering aptitude.* *J. educ. Psychol.*, 1939, 33, 280-289.—144 students of the freshman engineering class at the University of Saskatchewan were given a number of tests during their freshman year. The results were correlated with the criterion of average grades of the students in five first-year courses. Average of last year high school grades correlated .61, while A.C.E. psychological examination scores correlated .34 with the criterion. Cox

mechanical aptitude test (models) correlated .16 and (diagrams) .14, while a paper form board test yielded .25. The Bernreuter personality inventory scores gave nothing of significance with first-year marks. Physical science interest (Thurstone) correlated .26 and academic interest gave .20. Five other interest measures gave negligible correlations. Several test batteries were developed which yielded multiple correlations up to .66.—*R. M. Bellows* (Maryland).

5900. Luft, H. *Das Ermüdungsproblem beim Feldherrn.* (The problem of fatigue in the general.) *Arch. ges. Psychol.*, 1939, 103, 276-298.—The need of dealing with the often necessary fatiguing of officers directing military campaigns is discussed, with general suggestions concerning leave and recreation. The same considerations are said to apply to all executives to some degree.—*H. D. Spoerl* (American International College).

5901. Mancini, S. *Questioni di areonautica medica. Gli organi dei sensi nella orientazione del volo.* (Questions on medical aeronautics. Sense organs used in flight orientation.) *Osped. C. Ciano*, 1937, No. 3, 267-284; No. 4, 377-400.—*L. Canestrelli* (Rome).

5902. Mangiacapra, A. *Il "fenomeno d'ostacolo" di Donaggio negli aviatori.* (The Donaggio "obstacle phenomenon" in aviators.) *Arch. Soc. med.*, 1937, 63, 339-439.—Among aviator pilots after periods of physical fatigue from flying, positive evidence of the "obstacle phenomenon" was found in urine analysis. The intensity of the phenomenon (which is not very great when considered in itself) was inversely proportional to the training of the subject and directly proportional to the extent of the fatigue present. Studies on the "obstacle phenomenon" offer a useful and practical means for controlling the fatigue and consequently the training of aviator pilots.—*L. Canestrelli* (Rome).

5903. Mira, E. *Psychological work during the Spanish war.* *Occup. Psychol., Lond.*, 1939, 13, 165-177.—In the Spanish Republican Army the psychologists contributed as follows: A group test was specially devised for the detection of intelligence level and neurotic tendencies. 5 questions of the subjective type (e.g. the difference between democratic and fascist regimes) indicated intelligence level, and 5 others (e.g. describe your most courageous action) indicated neurotic tendencies. Troops selected on this basis had one third of the neurotic disturbances of those in an unselected group. (2) Military occupations were divided into 18 basic types of work, and occupational placement was determined by capacity and training possibilities, with special attention given to place of work because of the presence of neurotic symptoms, the least neurotic being placed in the firing line. (3) Special tests were devised for selecting air pilots—tests for estimating distance and for ability to draw profiles of irregular surfaces seen for 1 minute from a distance of 33 feet; other tests were devised to select troops to attack tanks. (4) Military training methods were re-

organized, and in cooperation with trade unions the civil positions of younger men were filled with men over 40 and with women who had adequate capacity and training.—*H. Moore* (Mt. Holyoke).

5904. **Ponzo, M.** *La legislazione italiana del lavoro e la psicotecnica.* (Italian legislation on labor and psychotechnics.) *Zacchia*, 1937, 1, No. 2, 125-131.—*L. Canestrelli* (Rome).

5905. **Rossett, N. E., & Arakelian, P.** A test battery for the selection of dial switchmen. *J. appl. Psychol.*, 1939, 23, 358-366.—A battery of 9 tests administered to 50 men trained at the Panel Dial School of the New York Telephone Company was found to yield a multiple correlation of .6778 with a ranking by instructors at the school. The test was administered to 222 men who had been trained at the school, and it was found that only 14 out of 135 surpassing a critical score were transferred due to failure on the job.—*E. E. Ghiselli* (Maryland).

5906. **Tulchin, S. H.** The clinical training of psychologists and allied specialists. *J. consult. Psychol.*, 1939, 3, 105-112.—An account of the development of clinical and applied psychology and a review of suggestions for training programs for clinical psychologists. Photograph of Carl E. Seashore.—*P. S. de Q. Cabot* (Simmons).

5907. **Vampa, D.** Studio sui rendimenti individuali di alcune categorie di impiegati. (A study of individual achievement in certain employee categories.) *Ann. di Statist.*, 1938, 4, No. 7, 1-71.—The author investigated individual achievements in 5 employee categories, illustrating his work with a number of graphs and tables. He concludes that from the point of view of individual ability and professional selection, the qualitative is more important than the quantitative element.—*R. Ricci* (Rome).

[See also abstracts 5636, 5641, 5656, 5689, 5769, 5876, 5921.]

EDUCATIONAL PSYCHOLOGY

(incl. Vocational Guidance)

5908. **Ade, L. K.** Meeting the needs of the mentally retarded. *Bull. Dep. publ. Instruct. Pa.*, 1939, No. 420. Pp. ix + 169.—"The attempt has been made in this bulletin to present a brief statement of the philosophy of education as it pertains to the education of the mentally retarded." Specific suggestions are made with respect to the steps to be taken in the establishment of single or multiple unit classes for such children. References to related readings, sources of supplies, and suggestions concerning the use of inexpensive handwork materials are included.—*M. Keller* (Butler Hospital).

5909. **Brown, C. H., & Brown, R. H.** Relation between achievement of medical students in preclinical medicine and achievement in clinical medicine. *Psychol. Rec.*, 1939, 3, 147-150.—The correlation coefficient between preclinical and clinical grade averages of students attending Rush

Medical College was $.61 \pm .02$. "The relationship between grade in a specific department of preclinical medicine and average clinical grade is greatest for pathology, least for anatomy and biochemistry."—*P. S. de Q. Cabot* (Simmons).

5910. **Coombes, D. M.** A study of the careers of pupils who enter a secondary school after a second attempt in the admission examinations. *Brit. J. educ. Psychol.*, 1939, 9, 145-163.—Data from careers at secondary schools of 1200 "second shotters" on the admission examinations were compared with those of over 1500 "first shotters." The former are on the average 9 months older. The average position gained in the entrance examination is far below that of the "first shotters." Compared with "first shotters" immediately below and above them in the entrance examinations the "second shotters" gained in position by the end of the first term and first year in secondary school, were about tied in the middle form, but lag behind in their last year. Successes in the school certificate and matriculation examinations are not so numerous for the "second shotters." However, the proportion of successes is sufficiently high to justify continuance of the practice of permitting second attempts to enter secondary schools.—*K. M. Cowdery* (Stanford).

5911. **Douglass, L. N.** A study of certain factors influencing academic achievement with special reference to the health factor. *J. exp. Educ.*, 1939, 7, 235-244.—When the 20 different measures employed in this study are considered in rank order as they affect achievement in English, two health measures (comprehensive physical examination and weekly physical examination) rank above all except the conventionally accepted measures of intelligence, high school average, and aptitude.—*H. W. Karn* (Pittsburgh).

5912. **Dwyer, P. S.** The correlation between age at entrance and success in college. *J. educ. Psychol.*, 1939, 30, 251-264.—24 previous studies are summarized; all show the same pattern—decreasing college grade averages for ages 15 to 21 and increasing averages for ages 21 to 25. Correlation between age and scholarship is small but significantly negative for men's groups and for total groups at the University of Michigan. The correlation seems to become smaller as the class progresses through college. There are two linear trends, a positive trend from 16 to 21 years, and a negative correlation from 22 years up. The absolute value of the correlation was not large enough to be used as a basis of individual prediction.—*R. M. Bellows* (Maryland).

5913. **Furniss, A.** The school ophthalmic service. *Brit. J. Ophthal.*, 1939, 23, 256-275.—The essentials of a complete school ophthalmic service are outlined with respect to personnel, administration, methods, and disposition of cases. Data on incidence of visual and ocular defects in some school populations are presented.—*R. J. Beitel, Jr.* (American Optical Company).

5914. **Hansburg, H.** An experimental study of the effect of the use of the print shop in the improvement

of spelling, reading, and visual perception. *Teach. Coll. Contrib. Educ.*, 1939, No. 776. Pp. viii + 84.—This study is concerned with "an experimental and statistical analysis of certain psychological effects of printing activity" in a special school for the education of dull normal and maladjusted children. Data obtained from standardized tests indicated "that the mechanics of English, specifically, spelling, reading, and language usage, were the only curricular subjects affected positively and consistently . . . only spelling and reading were affected sufficiently to warrant experimental study." The bibliography lists 29 titles.—*J. M. Stalnaker* (Princeton).

5915. Harms, E. Scholarly honesty, textbooks and teaching. *Educ. Forum*, 1939, 3, 323-328.—A discussion of the commercialization of educational undertakings and scientific activities. The author believes that most academic degrees in the United States are awarded under mass-production conditions. A similar criticism is made of the production of scientific papers and textbooks. The only help for these conditions is "the reawakening of a moral self-consciousness of truth and a feeling of responsibility towards it."—*R. M. Gagné* (Brown).

5916. Harrison, M. L. Reading readiness. (2nd ed.) Boston: Houghton, 1939. Pp. 262. \$1.40.—The first edition dealt with the more limited view of readiness for the initial period of reading instruction. This edition includes the extension of the program to all educational levels. Part 2 (98 pages), which appears for the first time, deals with readiness for the thinking side of reading.—(Courtesy *Publishers' Weekly*).

5917. Hepner, W. R. Factors underlying the unpredicted scholastic achievement of college freshmen. *J. exp. Educ.*, 1939, 7, 159-198.—This investigation deals with some of those elements in the student's background that are related to his variation from a standard of academic achievement in college predicted for him on the basis of his aptitude and his scholastic achievement in high school. The elements underlying unpredicted scholastic achievement were determined by statistical analyses of scores made on a large variety of tests and questionnaires. The findings lead to the emphasis upon the need (1) to view the individual student as a distinct person, (2) to work with him with all available knowledge, and (3) to avoid the feeling of contentment that comes with dependence upon general conclusions of statistical analyses, which, as the present study indicates, often obscure important data regarding the individual.—*H. W. Karn* (Pittsburgh).

5918. Jarvie, L. L. A developing guidance program. *Progr. Educ.*, 1939, 16, 25-33.—(*Educ. Abstr.* IV: 467).

5919. Kirkpatrick, F. H. Vocational guidance in an American college. *Hum. Factor, Lond.*, 1937, 11, 409-414.—In order to eliminate the waste involved in the students' usual chance selection of college courses, there has been instituted at Bethany College a system for vocational guidance. Upon the stu-

dent's entrance he is given a battery of intelligence, aptitude, and interest tests. He is also advised on the nature of the courses offered, their objectives, and the career to which they lead. In order to administer this a central office has been set up which contains complete files on the educational careers of the students. Picked faculty members advise the students, and department heads hold occasional conferences on the professions for which their specialties prepare. This organization has been quite successful. Of newly matriculated students, 30% arrived with their future vocation selected. At the end of their first year, however, 60% changed their minds.—*W. S. Verplanck, Jr.* (Brown).

5920. Krueger, R. L. Grades and intelligence quotients. (A study of the figures for three years in one private school.) *Sch. & Soc.*, 1939, 50, 60-64.—How close is the relationship between ability and accomplishment as indicated by IQ's and grades? To answer this question in a particular school average IQ's and grades in classes of different teachers and in different subjects were compared. By subtracting the IQ deviation (difference between the school average and the class average IQ) from the grade deviation an index of deviation is obtained for each teacher. Such a study made for three successive years itself decreased the number of large indices. A comparison of teaching loads was also made. Such tabulations would be of value to any private school.—*M. Lee* (Chicago).

5921. Lawton, J. A. A study of factors useful in choosing candidates for the teaching profession. *Brit. J. educ. Psychol.*, 1939, 9, 131-144.—Using as a criterion of teaching efficiency the teaching grade assigned by the colleges in which the students received their training, academic examination grades gave correlations of .45 to .48; ability to teach physical education .50 to .55, although general academic marks give with teaching physical education correlations of only .30 to .35, and if general teaching ability is partialled out these become .09 to .12. Number of college activities gave correlations with general teaching mark of .23 to .30; with physical training teaching mark .59 to .66. Interview and tutors' ratings of fitness gave correlations from .51 to .80. Combination of interview ratings and examination marks into a single index gave correlations of .70 to .82 with teaching grades.—*K. M. Cowdery* (Stanford).

5922. Libbin, M. Some application of psycho-analytic principles in a nursery school. *News Lett. Amer. Ass. psychiat. soc. Workers*, 1939, Winter, No. 8, 1-6.

5923. Mallory, E. B., & Olzendam, H. Student estimates of college courses considered in relation to interest, amount of work performed and grades received. *Sch. & Soc.*, 1939, 50, 30-32.—300 students rated courses taken the previous semester as to value, interest in subject matter, interest in class period, amount of work, enjoyment, and grade. The following significant results were obtained: Between value, enjoyment, interest in class period,

and interest in subject matter the intercorrelations range from .65 to .75. Amount of work is related to interest and enjoyment from .35 to .41, and not at all to grades obtained. The latter correlate with enjoyment .33 and with interest and value .19 to .25.—*M. Lee* (Chicago).

5924. **Nemzek, C. L.** The value of certain factors for direct and differential prediction of academic success. *J. exp. Educ.*, 1939, 7, 199-202.—The data from this study show that chronological age at entrance to elementary school, amount of education of father and mother, and occupational status of father have negligible value for purposes of direct and differential prediction of academic success as measured by honor point averages derived from teachers' marks; and that the IQ has value for direct prediction but not for differential prediction.—*H. W. Karn* (Pittsburgh).

5925. **Ormiston, M.** The bearing of general and special abilities upon scholastic success at the beginning and end of a secondary school career. Part I: Junior children. *Brit. J. educ. Psychol.*, 1939, 9, 164-173.—20 tests were applied to 100 elementary-school children aged 10 and 11 years. Factors identified as general, number, verbal, spatial, and spatial imagery were isolated. Relative success in the arithmetic, English and intelligence admission papers depend on *g*, *v*, *n*, and a "school factor," in the order named, with the spatial factors not effective.—*K. M. Cowdery* (Stanford).

5926. **Petch, J. A.** Performances in the constituent parts of a higher school certificate examination in classics. *Brit. J. educ. Psychol.*, 1939, 9, 174-187.—Examination grades in Greek, Latin, and Greek and Roman history for groups of 151, 158, and 189 candidates in three successive years were analyzed. Ability in Greek was found to be closely linked with ability in Latin, but neither showed marked relation to ability in Greek and Roman history. Very unequal performances in the various portions of the subjects were found within equally meritorious performances in Greek and Latin as whole subjects. Performances in "unseen translation" correspond most closely with performances in other portions of the subjects, and are most stable within the examination of a single year and from one year to the next. Prose composition, often permitted to play a predominating part in examinations, is relatively much less stable.—*K. M. Cowdery* (Stanford).

5927. **Piéron, H.** Ennemis et amis de l'orientation professionnelle. (Enemies and friends of vocational guidance.) *Bull. Inst. nat. Orient. prof.*, 1937, 9, 1-9.—After having refuted the objections to vocational guidance which have been made by the partisans of certain political, racial, and spiritual idealisms, Piéron affirms the validity of its foundation, which is based on the existence in men of different aptitudes derived from constitutional and hereditary factors. But besides its opponents, certain of the friends of the movement are equally dangerous. These make of it too easy a tool, and risk not only making errors, but even the ruin of the

whole work. One may not set himself up in vocational guidance alone, for not only are individual qualities required, but also a solid background in a number of different fields.—(Courtesy *Année psychol.*).

5928. **Pilley, J.** Evaluation and scientific method. *Psyche, Lond.*, 1937, 17, 132-142.—The author presents the general methodological considerations involved in the attempt to objectify procedures of educational evaluation.—*I. L. Child* (Harvard).

5929. **Ribsskog, B.** Standpunktprøver i regning. (Calculation tests.) Oslo: Gyldendal, 1936. Pp. 67.—This test of the development of the ability to calculate has been used with about 16,000 common school pupils in Norway, grades 2-7. It consists of 20 problems of increasing difficulty. The percentage of correct solutions increases through these grades in a linear curve. The average performance of boys is better than that of girls; the difference between the extreme ranges, which is somewhat unusual, increases with the grade. Better performance is obtained in schools in better social environments, although this distinction decreases with increasing age of the pupils. The test provides a convenient set of norms for school accomplishment over the entire country.—*H. Koch* (Rostock).

5930. **Rodger, A.** The use of tests in guidance. *Occup. Psychol., Lond.*, 1939, 13, 200-210.—To give adequate vocational guidance a person should be known from seven standpoints: circumstances, physique, attainment, intelligence, special aptitudes, interests, and disposition. Tests are of value in estimating only two of these. Their validity depends upon the administrator as well as upon the consistency with which they measure one element. Factor analysis has value chiefly when different tests are used to measure the same capacity; it has no value when the same tests are used in a large study, and cannot be of practical use in analyzing occupations. The changing state of occupations makes such analyses useless.—*H. Moore* (Mt. Holyoke).

5931. **Saija, E.** La scelta del mestiere e della professione alla luce delle qualità fisico-psichiche individuali. (Choice of trade and profession with respect to individual physico-psychological qualities.) *Riv. Assist.*, 1939, 9, 19-21.—*R. Ricci* (Rome).

5932. **Vidoni, G.** Le attitudini al lavoro e la loro determinazione durante la vita scolastica. (Work aptitudes and their determination during school life.) *Liguria med.*, 1937, No. 1, 1-7.—*L. Canestrelli* (Rome).

5933. **Watson, R. I.** The relationship between intelligence and the retention of course material in introductory psychology after lengthy delay periods. *J. educ. Psychol.*, 1939, 30, 265-279.—Correlations between intelligence and recognition and between intelligence and recall of material from a course in psychology (for both immediate and delayed retention) are reported for several groups of subjects. Conclusions: "1. A similar and substantial degree of relationship to intelligence was exhibited by (1) im-

mediate recognition and recall, and (2) delayed recognition and recall. 2. There was a tendency for the relationship of recognition and intelligence, and recall and intelligence first to decrease and then increase as the delay interval increased."—*R. M. Bellows* (Maryland).

5934. *Wilson, F. T., & Sartorius, I. C.* Early progress in reading: not reading readiness. *Teach. Coll. Rec.*, 1939, 40, 685-694.—More natural and functional ways of learning to read are suggested which it is hoped will lessen the present need for remedial reading instruction.—*J. M. Stalnaker* (Princeton).

5935. *Woods, E. L.* Guiding exceptional children. *Calif. J. elem. Educ.*, 1939, 7, 149-156.—(*Educ. Abstr.* IV: 420).

[See also abstracts 5593, 5596, 5611, 5768, 5785, 5831, 5850, 5879, 5889, 5899, 5906, 5943, 5944, 5945, 5947, 5956, 5969.]

MENTAL TESTS

5936. *Burt, C.* A judgment test for measuring intelligence. *Ment. Welfare*, 1939, 20, 45-48.

5937. *Cassin, L.* Remarques sur un procédé d'étalonnage, le tétronnage. (Remarks on a standardization procedure, the use of tetrons.) *Bull. Inst. nat. Orient. prof.*, 1937, 9, 213-217.—A brief presentation of a mode of standardization presented by Weinberg, and based on the American procedure which has been improperly called the "absolute scale." In this scale the unit step is $\frac{1}{4}\sigma$, called the "tetron," and the deviation of the individual case with reference to the arithmetic mean is expressed as the number of tetrons which separate it from the central step-interval, which extends from $M + \frac{1}{8}\sigma$ to $M - \frac{1}{8}\sigma$. This procedure has the advantage of a finer differentiation of cases at the extremes of a distribution and a theoretical precision superior to that of the decile method. For the comparison of the results of several tests this new method is very useful, particularly for the calculation of correlations, which it simplifies markedly.—(*Courtesy Année psychol.*).

5938. *Cureton, E. E.* Note on the IQ obtained from the Otis group intelligence scale, advanced examination. *J. appl. Psychol.*, 1939, 23, 416-417.—IB's (index of brightness, based on the difference between MA and CA), computed from scores on the Otis group intelligence test, were found to be less variable than IQ's computed from the same test. Otis IB's were also found to correlate slightly higher with Stanford-Binet IQ's and Stanford EQ's than did Otis IQ's.—*E. E. Ghiselli* (Maryland).

5939. *Feitscher, P.* Zu den Kleinkindertests von Bühler und Hetzer. (The baby tests of Bühler and Hetzer.) *Arch. Psychiat. Nervenkr.*, 1939, 109, 699-720.—Baby tests are useful only in the hands of skilled examiners who can observe possible psychopathological symptoms and interpret irregularities in the results in the light of the child's total

personality. An apparently unreasonable failure on the test may not be simply counted against the child, but one or more related tests should be used to discover its causes. The so-called developmental quotient is often not a good index of the level of mental development; nor may the question concerning the individual functional areas ("dimensions") be answered unequivocally after a single testing. The quantitative evaluation of results may easily lead to erroneous conclusions. The recent custom of including test items from other systems without necessary explanations has unfortunate consequences.—*P. L. Krieger* (Leipzig).

5940. *Hayes, L. D., & Drake, C. A.* The McCauley tetrahedron test. *J. exp. Educ.*, 1939, 7, 206-209.—Experimentation revealed that the McCauley test in its present form has the following defects: (1) Its items do not have a progressive order of difficulty. (2) It is often begun before the examinee comprehends the task. (3) It begins at a level of difficulty much too high for many to whom it is given. (4) It offers too many alternatives for effective trial-and-error performance. (5) The optimum time limit has not been experimentally established. The authors suggest principles to be followed in redesigning the test so as to remedy the defects.—*H. W. Karn* (Pittsburgh).

5941. *Hovland, C. I., & Wonderlic, E. F.* A critical analysis of the Otis self-administering test of mental ability—higher form. *J. appl. Psychol.*, 1939, 23, 367-387.—When a 30 min. period is allowed for taking the Otis self-administering test of mental ability nearly 40% of the subjects complete the test. When only 20 min. are allowed, this figure is reduced to 10%. The items are not properly arranged in order of difficulty for adult subjects, and an excessive number of them are inadequate in their discriminative power. Many supposedly comparable items in the various forms of the test are not of equal difficulty. An abridged and restandardized adaptation of the test is in preparation.—*E. E. Ghiselli* (Maryland).

5942. *Lorge, I.* The Thurstone attitude scales: I. Reliability and consistency of rejection and acceptance. *J. soc. Psychol.*, 1939, 10, 187-198.—Forms A and B of 15 of the Thurstone scales were given to 107 adults. Each scale was scored in 4 ways: median check score (Thurstone's recommendation); mean check score; median cross score (the median of the scores assigned to statements disagreed with); and mean cross score. For each scale the median check score gave the highest reliability between alternate forms, and the mean check score the next highest. The author concludes that a psychological-logical difference exists between acceptance and rejection, and that items rejected should not be given the same weights as those accepted.—*G. Brighouse* (Occidental).

5943. *McCullough, C. M., & Flanagan, J. C.* The validity of the machine-scorable Cooperative English test. *J. exp. Educ.*, 1939, 7, 229-234.—The evidence from this study indicates that the machine-

scorable Cooperative English test of the American Council on Education is highly adaptable to the field of English. Correlations were obtained, using scores made by large groups of high-school students, which showed substantial relationship between scores on the test and such criteria of validity as New York Regents' examination scores, and a minimum essentials test of grammar.—*H. W. Karn* (Pittsburgh).

5944. Nelson, E. Logic—machine scored? *J. appl. Psychol.*, 1939, 23, 414-415.—It was found that a highly reliable test consisting of multiple-choice items could be constructed to measure achievement in a logic course.—*E. E. Ghiselli* (Maryland).

5945. Ryans, D. G. A note on methods of test validation. *J. educ. Psychol.*, 1939, 30, 315-319.—Factor analysis techniques aid in the approach to evaluation of psychological measures. The procedure includes the following steps: selection of a number of measures involving situations presumed to demand the trait in question (criteria included when available); computation of intercorrelations and reliability indices; factor analysis; determination of the presence of factors and identification of trait in question; and determination of relative validities of measures.—*R. M. Bellows* (Maryland).

5946. Stephenson, W. Two contributions to the theory of mental testing. I. A new performance test for measuring abilities as correlation coefficients. *Brit. J. Psychol.*, 1939, 30, 19-35.—In a new performance test the individual had to make 20 copies of a standard shape from given pieces; these copies were not exact duplicates of the standard, but diverged from it more or less. Having constructed these under time-limit conditions, he was asked to appraise them for their degree of likeness to the standard. It was shown that with these tests the ability of one individual at a time could be correlated with that of another, whose expertness was accepted as a basis of measurement, and that the correlations so obtained were themselves a direct measure of ability—at least to the extent shown by a correlation of .768 with ability as measured in the usual way, by the time it takes an individual to solve the same tasks. The time scores and the appraisal arrays reached very similar ends.—*M. D. Vernon* (Cambridge, England).

5947. Studencki, S. Bewährung von Massenprüfungen und ihre Fehlerquellen. (The value of group tests and their sources of error.) *Kwart. psychol.*, 1939, 11, 55-67.—A comparison was made between group examinations and questionnaires given to 380 students before entering trade and technical schools, and individual testing carried on after the students were admitted to school. The individual tests included some of intelligence and personality. Detailed observations of behavior were made of all subjects, and their family and social backgrounds were taken into consideration. The group examinations were found to be deficient in obtaining an understanding of the individual and

predicting his success in school.—*T. M. Abel* (New York City).

5948. Wåhlén, A. Korfattad metod för experimentell undersökning av den allmänna intelligensnivån. (Abbreviated method for experimental investigation of general intelligence level.) *Svenska Läkartidn.*, 1939, 36, 1126-1128.—Since Wåhlén's point scale of 1924 is out of print, he has now worked out a new series of 50 tests, standardized on 400 school children of ages 7 $\frac{3}{4}$ -12 $\frac{3}{4}$, and on 100 soldiers having a public school education. For Wåhlén's definition of intelligence, see XIII: 1339.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

[See also abstracts 5438, 5668, 5823.]

CHILDHOOD AND ADOLESCENCE

5949. Anderson, H. H., & Brandt, H. F. A study of motivation, involving self-announced goals of fifth-grade children and the concept of level of aspiration. *J. soc. Psychol.*, 1939, 10, 209-232.—53 children were given 6 number-cancellation tests, spaced over 3 weeks. After the initial test, each child was given privately his own score on the previous test and his relation to the rest of the class. He was then asked to indicate what score he expected to make on the next test. 24 children in a control group were given the same tests but without knowledge of their scores. The experimental group improved significantly more than the control group. In the experimental group, those with the poorest achievement set their goals considerably higher than their past performances, and those with the best achievements set their goals relatively lower. All levels of aspiration tended toward mediocrity.—*G. Brighouse* (Occidental).

5950. Banisconi, F. Il significato psicologico dei giuochi nell'infanzia. (The psychological importance of play materials in childhood.) *Riv. sci. appl. Educ. fis. giov.*, 1937, Nos. 4-5, 215-221.—*R. Ricci* (Rome).

5951. Brander, T. Anamnestiska och katamnestiska uppgifter angående 376 för tidigt födda barns utveckling och öden till och med skolaldern. (Anamnestic and catamnestic data concerning 376 prematurely born children.) *Finska LäkSällsk. Handl.*, 1938, 81, 1183-1193.—On the basis of inquiries, various data were collected concerning the later development of prematurely born children of various birth-weight categories. Of psychological interest is the finding that the lower the birth weight, the longer it took for the children to learn to talk. Of 324 of these children who had reached school age, 91% were in normal classes, and 9% were definitely mentally defective. (See XII: 1902, 6119).—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

5952. Brander, T. En del psyko- och neuropatiska drag hos för tidigt födda barn i skolaldern. (Some psycho- and neuropathological characteristics of prematurely born children during school age.)

Finska LäkSällsk. Handl., 1939, **82**, 585-590.—An investigation of 376 prematurely born children aged 7-15 from the lower social strata in Finland gives, among others, the following results: 14.9% enuretics, 20.5% pavor nocturnus, 6.1% somnambulism, 1.1% encopresis, and 4.8% stutterers. (See XIII: 5951.)—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

5953. *Brander, T.* Einige psycho- und neuropathische Züge bei frühgeborenen Kindern im Schulalter. (Some psychopathic and neuropathic traits among prematurely-born children of school age.) *Z. Kinderpsychiat.*, 1939, **6**, 1-7.—First installment of a study of 376 children, running in age from 7 to 15 years, who were prematurely born. Schizoid traits are found more frequently than cyclothymic ones. 32% of the whole group have some neuropathic symptoms. Both psychopathic and neuropathic symptoms are more common among the group whose birth weight was at the lower end of the distribution.—*D. Shakow* (Worcester State Hospital).

5954. *Butterfield, O. M.* Love problems of adolescence. *Teach. Coll. Contrib. Educ.*, 1939, No. 768. Pp. viii + 212.—The objects of the study were "to list the love problems of adolescents and to secure some rough measure of their relative frequency," and "to make some analysis and explanation of their relation to current culture pressures." The data were secured from anonymous questions and check lists obtained from 1169 young people (550 boys and 619 girls), ranging in age from 13 to 25 years, divided into 24 discussion groups, mostly under Protestant religious auspices. These data were supplemented by the records of 328 other individuals in five similar groups, and by personal interviews and case records taken from the author's general practice as a consultant. The accumulated data are classified and discussed under the following headings: starting boy-and-girl friendships, making a good impression, keeping steady company, engagement problems, and problems concerning marriage. The discussion of each set of problems gives the original spontaneous questions from the groups, the check-list reports, and the supplementary case reports and findings of related research literature. "In general, it may be concluded that while the study reveals no new problems, neither does it reveal any for which there is not considerable educational and psychological remedy." A summary of the groups studied and copies of the check-list forms are given in the appendix. The bibliography lists 222 titles.—*J. M. Stalnaker* (Princeton).

5955. *Cousinet, R.* Sur le mensonge chez les enfants. (On lying in children.) *J. Psychol. norm. path.*, 1938, **35**, 230-245.—Observations on lying in children have almost always indicated that it was universal but without meaning or importance. The reason for this attitude is that lying is for us such a grave offense, implying deceiving with premeditation, that we could not bear the thought of children consciously lying. There is another aspect of lying

which does not make it appear to be such a sin, namely, merely consciously altering the truth. Lying is an exceedingly important and necessary part of the child's development, as it not only preserves his peace and protects him from outside forces but aids in creating his individuality and personality.—*R. E. Perl* (New York City).

5956. *Freeston, P. M.* Vocational interests of elementary school children. *Occup. Psychol.*, Lond., 1939, **13**, 223-237.—100 children, ages 5-13, gave spontaneous reports of their vocational interests by means of drawings of themselves as they hoped to be when they were mature, and by means of written reports of what they would like to be and what they were going to try to become. From 34 to 50% showed contradictions in the two types of reports in the different age levels. Their proclaimed ambitions were divided into three groups: possible, unlikely, impossible. The possible fell from 82% at age 8 to 50% at age 14. The desire for adventure and for escape from humdrum work account for the unreliability of the choice at age 14. The higher the level of intelligence the more impossible the goal; the duller and less imaginative tend to make fewer impossible choices than the brighter. Relatives and known workers were less often mentioned as inspirers of the choice than their heroes and heroines, the boys being most affected by the world of sports and the girls by the cinema.—*H. Moore* (Mt. Holyoke).

5957. *Friend, R. S.* Influences of heredity and musical environment on the scores of kindergarten children on the Seashore measures of musical ability. *J. appl. Psychol.*, 1939, **23**, 347-357.—With 42 preschool children the test-retest reliability of the McGinnis adaptation (pitch, intensity, consonance) of the Seashore musical ability test was found to be .778. The correlation between the child's test score and parents' ratings of the child was .264, while that with teachers' ratings was .147. The correlations between children's test scores and musical environment were all low. The parent-child correlations in test scores were pitch .144, intensity .456, and consonance —.111.—*E. E. Ghiselli* (Maryland).

5958. *Grant, E. M.* Coming of age; a frank study of the problems of adolescence. New York: Revell, 1939. Pp. 91. \$1.00.

5959. *Grüneberg, R.* Psychologische Typen im Kindesalter. (Psychological types in childhood.) *Ann. paediat.*, 1938, **152**, 178-191.—"After a survey of the present-day problem of types in child psychology, observations are made of the behavior of children who present educational difficulties. The children are grouped into obstinate, babyish, shy, and unchildish types. It is demonstrated that there are many transitional shades between these types and the normal ones. This fact can be used for the psychological understanding of normal children."—*F. L. Goodenough* (Minnesota).

5960. *Hahn, R.* Fürsorge und Heilpädagogik. (Protective care and therapeutic education.) *Fortschr. Neurol. Psychiat.*, 1939, **11**, 247-262.—The

present status of child care and research projects with reference to neglected, mistreated, institutionalized, and atypical children is discussed. The author describes the programs of various "homes" for dependent children, wanderers, cripples, and the feeble-minded. Statistical and other studies dealing with personality and constitutional structures of such children are considered. Bibliography.—D. S. Oberlin (Delaware State Hospital).

5961. Jadoulle, A. *Un cas d'enfant surdoué.* (The case of an exceptionally gifted child.) *Arch. belges Sci. Educ.*, 1937, 4, 261-268.—The author presents the case of a child who throughout his school career has maintained an exceptionally high IQ. In his first school year he was given the Terman and the Vermeulen tests, and obtained in both an MA of 8 years. At the beginning of his 6th year he took the Piéron psychological test, and his profile equalled the average for 12-14-year-old children. He succeeded equally well at a variety of other tests administered over a period of years. At the age of 9 years 9 months his IQ as determined by the Terman tests was 177. This child was born of the union of first cousins. His father is an inventor and his mother has completed brilliant secondary studies. All his grandparents are exceptionally intelligent. His home environment is happy and easy.—(Courtesy *Année psychol.*).

5962. Ketcham, D. *One hundred thousand days of illness.* Ann Arbor: Edwards, 1939. Pp. xx + 477. \$2.00.—The book presents a study of experiences during the period of hospitalization and subsequently of 275 patients over a 16-year interval. Section A deals with the medical and social needs of the child patient, while section B considers the phases having to do with learning experiences, such as the child and his illness, his experience in school, occupations, activities, library, and the child in his home and community. Section C discusses the child in social living. This study was made by the social services at the University Hospital, Ann Arbor, including case work, hospital school, occupational therapy, various activities, and library services. The author gives numerous illustrations with pictures throughout the book and a summary of legislation, typical projects and activities, the use of waste materials, and a bibliography, with a subject index at the end.—K. S. Yum (Chicago).

5963. Köttgen, H. U., & Tiling, W. *Chronaxieuntersuchungen im Kindesalter. Gleichzeitig ein Beitrag zur Frage des azetonämischen Erbrechens.* (Studies of chronaxy in childhood, including a contribution to the question of acid vomiting.) *Arch. Kinderheilk.*, 1938, 115, 202-216.—Changes in chronaxy of children suffering from spasmophilia, parathyroid tetany, epilepsy, uremia, and other convulsive disorders were studied according to the method devised by Bourguignon. Results were compared with those obtained from normal children under varying physical conditions such as hunger and fatigue. The results are believed to throw light on the physical and neurological correlates of convulsive attacks.—F. L. Goodenough (Minnesota).

5964. Levy, D. M. "Release therapy" in young children. *Child Study*, 1939, 16, 141-143.

5965. Maberly, A., & Sturge, B. After results of child guidance. *Brit. med. J.*, 1939, 1130-1134.—W. J. Brogden (Wisconsin).

5966. Maublanc, R. *Le sens de la propriété chez les enfants.* (The sense of ownership in children.) *J. Psychol. norm. path.*, 1938, 35, 245-269.—This is a report of observations on the sense of private ownership as it developed in twin girls starting with early infancy. The author thinks that the sense of private property appears in children under the pressure of circumstances and under the influence of social conditions. It is urged that in the education of children a division be made between the legitimate use of the sense of ownership and its abuse. The legitimate use is connected with an obligation and a responsibility, while the abuse degenerates into exclusive monopoly without use but with deprivation of others.—R. E. Perl (New York City).

5967. McGraw, M. B. *Reflex swimming movements in the newborn of different species.* (Film.) New York: Columbia Medical Center, 1939. 1 reel, 100 ft. 16 mm. (silent). \$8.00 sale.—The newborn human infant when submerged in water manifests a rhythmical, well co-ordinated swimming movement, consisting of associated bilateral flexor-extensor movements of upper and lower extremities together with a lateral flexion of the trunk; that is, when the right leg is flexed the body is flexed to the right. This association of ipsilateral leg and side of the trunk appears to be representative of the neural integration which characterizes swimming movements in all aquatic animals. As the infant grows older this reflex integration becomes disorganized, as evidenced by the struggling, inco-ordinate movements which he manifests when he is submerged in water. Since this behavior of the newborn suggests functional evidence of the phylogenesis of man a series of movies showing the swimming reflex in the newborn of different vertebrates has been assembled. This series includes the swimming behavior of the following animals: a one-day-old rat, a one-day-old kitten; a pouch-young opossum (165 mm. in length), a two-weeks-old rabbit, a one-day-old guinea pig, a five-day-old monkey, a monkey a few weeks old, as well as a newborn infant and a baby several months old. The similarity of the reflex movements as manifested in the behavior of the different species is striking, as is also the disorganized pattern in the older of the two monkeys and the older baby.—M. B. McGraw (Columbia).

5968. Montessori, M. *The secret of childhood.* (Trans. by B. B. Carter.) New York: Stokes, 1939. Pp. xi + 286. \$2.50.—An exposition of a child psychology predicated on the thesis of an innate, hidden psychic life of childhood whose normal manifestations are often unperceived and inadvertently marred in an adult-conceived and adult-controlled environment. It embraces, essentially, a "form of assistance to the psychic life of infancy" and demands "the ascertainment of psychological facts as

yet unknown to the child, and at the same time an awakening of the adult, who in regard to the child adopts mistaken attitudes that have their root in the subconscious." Part I, "The Spiritual Embryo," develops the concept of this inner character of the child as dynamic, creative, comprising transient sensibilities conducive to development. Illustrative incidents are cited. Part II, "The New Education," emphasizes the necessity of providing an environment which allows for normal development unimpeded by adult repression, and describes the origin and development of the Montessori schools as a concrete expression of these principles. Psychic deviations, which are attributed to a single source—preventing of the child from fulfilling the original pattern of his development—are said to disappear in the "normalizing" environment of the schools. Part III, "The Child and Society," envisages the emergence of the world of the child and of the adolescent, with the gradual evolution of the natural guidance necessary to the normal life of society.—*R. C. Strassburger* (St. Joseph's College).

5969. Pérez Bravo, E. *Über den sprachlichen Ausdruck am Ende der Grundschulzeit, erläutert am Beispiele chilensischer und deutscher Kinder.* (Verbal expression at the end of the primary school period, discussed from examples of Chilean and German children.) Leipzig: Edelmann, 1939. Pp. 35.

5970. Rallison, R. *The scientific interests of senior school children.* *Brit. J. educ. Psychol.*, 1939, 9, 117-130.—From 1659 boys and 1855 girls, all over 9 years of age, in various types of communities were obtained uncontrolled questions as to things they would like to know about. Analysis led to the conclusions that boys concentrate their interests in the scientific field; girls' interests are more widespread but with a definite core of scientific interest; biology, chemistry, mechanics, and electricity dominate the interests of both sexes; boys and girls are interested in the same sciences to rather similar degrees; sex influence on the main scientific groups seems to be greatest in the township and rural groups; environment affects boys more than girls as to distribution between scientific and non-scientific interests; city children acquire the bulk of their main interests in science before the 11-year stage, township children in the 12-year stage, rural children more evenly over the whole age range to 13.—*K. M. Cowdery* (Stanford).

5971. Rogers, C. R. *The clinical treatment of the problem child.* Boston: Houghton, 1939. Pp. 393. \$3.00.—This book is an attempt to bring together the body of practical experience in the treatment of maladjusted children which clinicians have been accumulating during the past 15 years. 2 chapters are devoted to a discussion of the most usable diagnostic procedures for understanding the child. The remainder of the book takes up and

critically evaluates the treatment methods used by professional workers in the clinical, social work, and educational fields. The use of the facilities of the school, the recreational group, and the camp in the treatment of the individual child; the techniques of changing harmful parental and family attitudes; the methods of conducting various levels of treatment interviews; the use of foster home placement and institutional care—these and other avenues of treatment are discussed. Criteria are given to assist in the intelligent selection of treatment methods in the case of a particular child. The book summarizes clinical experience and available research regarding each type of treatment, and contains up-to-date bibliographies permitting further study of each topic.—*R. R. Willoughby* (Brown).

5972. Schöberlein, W. *Zur Frage der Entwicklung der Unreifegeborenen.* (On the question of the development of infants prematurely born.) *Msschr. Kinderheilk.*, 1938, 76, 80-106.—A study of the development of 776 prematurely born infants in relation to birth weight. Within this group, birth weight varies inversely with infant mortality, age at walking, talking, and establishment of basic habits such as bladder control; and directly with progress in school, intelligence quotient, ability to concentrate, and freedom from fatigue. The frequency of undescended testicles and of internal strabismus was distinctly greater among the group as a whole than among children in general.—*F. L. Goodenough* (Minnesota).

5973. Schröder, H. *Anlage und Umwelt in ihrer Bedeutung für die Verwahrlosung weiblicher Jugendlicher.* (The significance of disposition and environment for waywardness in adolescent girls.) *Allg. Z. Psychiat.*, 1939, 112, 224-236.—In nearly all instances sexual waywardness seems due to a corresponding abnormal personality trend.—*P. L. Krieger* (Leipzig).

5974. Zillig, M. *Schulfreundinnen.* (School-girl friendships.) *Z. Psychol.*, 1939, 145, 236-252; 281-357.—The study dealt with the 11- and 12-year-old girls of one class over the entire period of their 5th and 6th years in school. Three aspects of friendship—its manifestations, the influence of environment and personality, the effect of personal friendships upon the community life of the class as a whole—were studied by means of tests, close observation, school grades, and individual interviews. The results showed the imperative need for friendship and the permanency of friendship relationships, especially between pairs of friends. Equality of age was an important factor; personality was the chief determining factor.—*S. W. Downs* (Berkeley, Calif.).

[See also abstracts 5558, 5596, 5603, 5613, 5674, 5702, 5705, 5706, 5750, 5763, 5776, 5819, 5832, 5843, 5848, 5861, 5939.]

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